Design Guide for the Built Environment of Behavioral Health Facilities

Now with Patient Safety Risk Assessment (PSRA) tool

by James M. Hunt, AIA, NCARB and David M. Sine, DrBE, CSP, ARM, CPHRM

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“The hospital plans activities to minimize risks in the environment of care.”

“Risks are inherent in the environment because of the types of care provided and the equipment and materials that are necessary to provide that care. The best way to manage these risks is through a systematic approach that involves the proactive evaluation of the harm that could occur. By identifying one or more individuals to coordinate and manage risk assessment and reduction activities – and to intervene when conditions immediately threaten life and health – organizations can be more confident that they have minimized the potential for harm.”

“The hospital manages safety and security risks.”

“Safety and security risks are present in most health care environments. These risks affect all individuals in the organization – patients, visitors, and those who work in the hospital. It is important to identify these risks in advance so that the hospital can prevent or effectively respond to incidents.”

-- The Joint Commission
“Standards and Rationale”
2012 Hospital Accreditation Standards

“Listen to the patients, they’ll tell you what you need to know.”

-- J.J., Safety Officer,
Greystone Park State Psychiatric Hospital, New Jersey
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Design Guide for the Built Environment of Behavioral Health Facilities:
Edition 6.2
April 2014

In an effort to keep up with the rapidly increasing number of new products that are becoming available for use in behavioral healthcare facilities, this document will be updated more frequently. The date of the latest posting will be provided in the upper left corner of the cover page and at the bottom of each page.

Readers are urged to check www.naphs.org whenever referring to this document to assure that the latest information is being accessed.

EDITION 6.2
All revisions and/or additions made since edition 6.0 are shown in blue, including the borders of images.

The electronic version of this edition is searchable (CTL+F) on computers to make it easier to find exactly what you are seeking.
INTRODUCTION
This document is intended to address the built environment of the general adult inpatient behavioral healthcare unit. Additional considerations that are not addressed here are required for child and adolescent patients, patients with medical care needs, geriatric patients, and some patients with diagnoses such as substance abuse and eating disorders.

This document is not a replacement for regulatory requirements, but rather augments them to detail practical means of protecting patients and staff. It is intended to represent best current practices, in the opinion of the authors. It is not intended to represent minimum acceptable conditions and should not be interpreted as establishing a legal “Standard of Care” which facilities are in any way required to follow.

NOTE:
Product information included in this document is intended for illustration of one or more specific items that are deemed appropriate for use in this type of facility. Comparable products by other manufacturers meeting the same design criteria may be substituted after careful comparison.
A WORD FROM THE AUTHORS

The Design Guide continues to be based upon our experiences in the field as operators, designers, consultants, and surveyors: what we have seen that is working and what we have seen that has not worked. Since first electronically published by NAPHS in 2003, we have received and welcomed countless suggestions, recommendations, and comments from users of the Guide which continue to inform and lead us to new discoveries. We are grateful and humbled by how well our suggestions have been received and inspired others to think of new solutions to the inherent challenges of the behavior health built environment.

We hope that this edition of the NAPHS Design Guide for the Built Environment of Behavior Health Facilities will meet the expectations of and prove useful to the designers, operators, and clinicians who are entrusted with both the care of behavioral health patients and with the environment of care in which those people are cared for and treated.

As always, we introduce this edition by repeating how we introduced the 2003 edition; with a reminder that “...while a safe environment is critical, no environment of care can be totally safe and free of risk. No built environment – no matter how well designed and constructed – can be relied upon as an absolute preventative measure. Staff awareness of their environment, the latent risks of that environment, and the behavioral characteristics and needs of the patients served in that environment are absolute necessities. We also know that different organizations and different patient populations will require greater or lesser tolerance for risk; an environment for one patient population will not be appropriate for another. Each organization should continually visit and revisit their tolerance for risk and changes in the dynamics of the patient population served.”

As before, we have highlighted products that we have found to be both safe and able to withstand the rigors of use in the behavioral healthcare environment. However, inclusion or exclusion of a product does not indicate endorsement or disapproval (nor that any product we identify is free of risk). There may be equivalent products available: all facilities should continually look to the marketplace to find products that are safer and more cost-effective.

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SHARE YOUR BRIGHT IDEAS

A continuing feature in this updated edition is the inclusion of Bright Ideas that are indicated by the graphic shown at the left. These are applications that we have thought of, or that have been suggested by readers, that do not require the use of any specific product, but utilize readily available items in creative ways to improve the safety of these units. Most of these Bright Ideas can be implemented by maintenance staff at nominal cost. We thank those who have contributed these ideas and information on new products. We encourage this kind of input and invite feedback from you, the readers. With your help, this can become a compilation of the best thinking of the industry. We promise to include more of your Bright Ideas in the future.

ACKNOWLEDGEMENTS

We want to express our appreciation to the following professionals who have shared their insight and experience with us and helped make this edition more helpful to other readers:

Larry Denoyer – The Menninger Clinic
Steve Lindquist – Avera McKennan Behavioral Health Services
Tom Hess – Sheppard Pratt Health System
Byron Kitagawa – Sharp Healthcare Corp.
Steve Sullivan - Britton Construction
Tim Rappold - The Good Shepherd Center
Tom Ferrel - Systems West Engineers
Steven Shilts, RN - La Jolla Veterans’ Medical Center
Tom Loats, St. Joseph Hospital
Carter Wright, CWC Corporation
A WORD FROM NAPHS

THE VALUE OF FOCUSING ON THE BEHAVIORAL HEALTH ENVIRONMENT

The National Association of Psychiatric Health Systems (NAPHS) is proud to partner with authors Jim Hunt and David Sine to bring you this unique, valuable, and newly revised resource. The earlier editions of this publication were extremely well received by the behavioral healthcare field, and we appreciate the authors’ efforts to incorporate new products and thinking into this edition.

Whether you are involved in designing a new building, renovating space, or maintaining an existing behavioral healthcare program, this document is designed to help you think through the many aspects of the environment that can have a significant impact on patient safety.

In behavioral health care, this is particularly important as many patients are admitted because they are at risk of harming themselves or others. In every aspect of building design and maintenance, it is essential to make determinations about the built environment based on the potential risk to the specific patient populations you serve. This requires a continuous process of review and evaluation. The Design Guide is unique in that it gives you a concrete starting point for your internal discussions.

There are no hard and fast answers, and there may on occasion be conflicting state or federal requirements that you will need to discuss with your own attorneys. Some questions to consider:

- Could a patient be hurt by this aspect of the environment? Could they use it to harm someone else?
- Can staff easily navigate the environment to get to patients in need of assistance?
- Is it possible to maintain patient privacy in this environment?
- Is the environment a respectful, therapeutic one that will contribute to recovery?

NAPHS does not endorse or recommend any specific product, nor does exclusion of a product indicate disapproval. However, we believe that it is important to share ideas that can help you in the process of continuously enhancing patient safety and improving patient care.

Mark Covall
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GENERAL COMMENTS

1. Space Planning Considerations:

A. **Behavioral health units and facilities should be designed to appear comfortable, attractive, and as residential in character as possible.** The focus on patient and staff safety has often pushed the aesthetics of these units toward the appearance of a prison environment. The Planetree organization actively advocates for patient centered design and has made a significant positive impact on the general hospital therapeutic environment. However, many “healing environment” features that are desirable for a medical surgical environment do not adapt well to behavioral health units and hospitals. Planetree designated its first Patient-Centered behavioral health hospital in 2011.

   The final design must avoid an “institutional look” while meeting the array of applicable codes and regulations as well as the therapeutic and safety needs for patients and staff. The challenge, therefore, is to strike a balance between the safest possible healing environment and a non-institutional appearance that is correct for the unique conditions that exist in each and every facility.

B. **Nurse stations should provide the least possible barrier between staff and patients.** This goal is sometimes felt to be in conflict with staff safety concerns. Some facilities have been successful in finding ways to prevent patients from jumping over the counter without providing solid barriers that restrict conversations and the exchange of objects. HIPAA (*Health Insurance Portability and Accountability Act of 1996*) privacy regulations make an “open” design increasingly challenging. Patient records, electronic or otherwise, must be protected from view of other patients, visitors and unauthorized staff. Care must also be taken to shield computer monitors from unauthorized viewing. Areas must be provided in which clinical staff may discuss patients without being overheard by other patients or visitors. Provision should be made to accommodate storage of charts and patients’ valuables in appropriately secure areas. The advancements in electronic medical records have somewhat reduced the need to provide all of the charting-related activities and spaces in the area behind the nurse station. Since the electronic “chart” can be accessed from many locations, the area around the nurse station can be utilized for more patient-centered activities in many cases.

C. **Gathering areas for patients near the nurse station are encouraged because patients often congregate near there to socialize.** It is far better to plan for this in the original design and to accommodate this behavior. This area should encourage comfortable seating and places for conversation, card or board games and other quiet activities that will not be distractions for staff working in the nursing station. Television sets, CD players, etc. should not be included at these locations. Many facilities are now experiencing issues, especially with younger patient populations, regarding use of electronic devices (e.g., iPods, MP-3 players, and similar devices).
Many patients like these electronics and say they help keep them calm, but the wires on the earphones can be hazardous. This is just one of many decisions that facilities will need to weigh to determine the level of risk they are willing to accept for the perceived benefit. It should always be remembered that a patient who is assessed as safe to have the player may set it down where another patient may pick it up to gain access to the wires.

D. **Chart rooms and other staff areas should be located so that staff members may have conversations regarding patients and other clinical matters without being overheard by patients or visitors.** Teaching hospitals that have a large number of residents and/or students making rounds will need larger spaces for confidential conversations. The expansion of the use of electronic medical record technology is continuing to change the needs and configurations of these rooms.

E. **Medication rooms should be sized to accommodate the number of staff that will be necessary at peak times as well as planned for future (if not current) computer systems.** HVAC and electrical systems should have sufficient capacity to accommodate the cooling load of the refrigerator, computer, automated medication systems, and the number of people who may be in the room at peak times. The medication room should also have a hand-washing sink. The room should be sized to accommodate storage of the medication cart when not in use without restricting use of the space by staff. (See “Guidelines for Design and Construction of Hospital and Health Care Facilities - 2010;” 2.1-2.6.6.1.) Note: a new edition of this document is scheduled to be released in early 2014.

F. **When possible, locate service areas (such as trash rooms and clean and soiled utility rooms) so that they are accessible both from the unit and from a service corridor.** This eliminates the need for environmental staff servicing these rooms to enter the treatment areas of the unit and possibly disturb patient activities. All doors to these rooms must be kept locked at all times.

G. **Traditional nurse call systems for patients to use to get assistance from nursing staff are not required in behavioral health units.** There are significant new developments in duress alarm systems that greatly improve safety for staff when in a threatening situation with patients. These utilize sensors located in all patient-accessible areas and a small device that the staff members wear. If the staff feel threatened and want other staff to come, the device can be activated. The alarm annunciates in different ways with the various products, but all provide the exact location of the staff activating the alarm.

H. **When possible, have all electrical outlets in each patient room be tamper resistant, hospital grade units on Ground Fault Interrupted Circuits (GFCI) and have the breakers for these circuits located where they are readily available to staff without entering the patient rooms.** This is easily accomplished in new construction and very difficult to accomplish in remodeling projects.

I. **All electrical circuits having receptacles near sources of water (such as sinks, lavatories, and toilets) must be protected by (GFCI) breakers.** Simply replacing one receptacle on a circuit with a GFCI-equipped receptacle provides that protection for the
entire circuit. It should be noted that this can cause complications in that poorly maintained equipment (such as vacuums and floor polishers) may trip these devices.

J. When possible, locate water shut-off valves in corridor walls where they are accessible from the corridor by opening a locked access door. This has been successfully accomplished during remodeling projects of existing units.

K. When possible, locate serviceable parts of patient-room HVAC systems where they can be serviced without entering the patient rooms. In new construction, consideration should be given to radiant heating and cooling systems that greatly reduce the need for mechanical devices in the patient rooms.

L. Housekeeping rooms should be large enough to lock away the carts when not in use. All cleaning materials must be locked inside at all times when the carts are in patient areas or corridors and not attended by staff.

M. Smoking areas (if provided) should be outdoors. These can be in the form of screened-in porches using heavy stainless steel screen fabric similar to that specified in Level 3.H.1. below. Furniture should be securely anchored in place. Provision should be made for staff observation without having to breathe the second-hand smoke. No waste baskets should be allowed in these areas. Indoor smoking is not permitted now in most facilities, and many hospitals have gone to smoke-free campuses.

N. At the time of this writing, the applicable standards [Guideline for Design and Construction of Hospital and Health Care Facilities, published by the facility Guidelines Institute, 2010 edition] require 100 net usable square feet per private patient room and 80 net usable square feet per patient in semi-private rooms (2.3-2.1.1.2(2)). All requirements of the Guidelines, NFPA 101 Life Safety Code (2012 edition), The Joint Commission Standards, as well as state and local regulations and building codes must be incorporated into the planning.
2. Safety:
The level of concern for the safety of patients and staff due to the
design of the built environment is not the same in all parts of a
behavioral health unit or facility. The level of precautions necessary
depends on the staff’s knowledge of the patient (i.e. the patient’s
intentions regarding self-harm) and the amount of supervision the
patient will have while using that part of the facility.

Previous editions of this Design Guide have proposed that the level of
concern for patient safety in the behavior health built environment
could be stratified into five categories (with five being the highest level
of concern). The lowest level (Level I) was described as spaces
having no patient access or under constant supervision such as staff
and service areas and correlated to an area in which some latitude
was available regarding design, construction, and materials used. The
highest level (Level IV) was described as an area within the built
environment where patients were present with unknown or unassessed
risks and in which patients could be cared for that were in a highly
agitated condition. The Level V areas present special considerations
that need to be addressed individually.

This approach of risk levels based on a functional statement of
intended usage has been adopted by many others with varying
numbers of levels but all share a similarity of describing the level of risk
for a room or space that is similar to spaces with a similar occupant
function (i.e. admissions rooms, examination rooms, etc.). However,
some rooms or room functions can comfortably fit into more than one
category or sit on a blurry boundary between two categories. In
addition, the categories do not anticipate every use of every room.
Thus, facility clinical staff and facility designer may be making
assumptions when a room is described as an “activity room” and a
level of concern to drive design choices is made that does not meet the
actual needs of the stakeholders in an operating environment. For
example, a Day Room may be located so that it is within line of sight of
a nurse station that “always has staff present”. However, if there is a
patient who can’t sleep and he or she is in the Day Room watching
television at 2 AM and the only staff on duty is making rounds, the
patient may actually be “completely alone” for a period of time in a
space that may contain hazards.

For this edition of the Design Guide the authors propose that the
conversation between clinical staff and designers regarding patient
safety could be facilitated by the use of a “patient safety risk
assessment” (PSRA, see page 14) that, in a Cartesian matrix,
considers the opportunity for a patient to be alone in a particular space
(of any name) on one axis and a level of risk of self-harm on the other

The greater the opportunity for a patient to be alone the greater the opportunity for self-harm and the greater the caution that should be taken regarding design choices and materials. The authors acknowledge that patient intent for self-harm is often opaque and difficult to assess but place “actively suicidal” on the far end of this scale and describe the opposite end as “self-harm not anticipated”. Privacy is arranged with close observation (such as “1:1 observation”) on one end of the opportunity scale and the patient “completely alone” on the opposite end of that scale. This risk matrix is partly informed by longitudinal studies done by the Veterans Health Administration of the frequent locations of acts of self-harm by inpatients and supported by Joint Commission data and is further influenced by the seminal works of Richard Prouty on risk maps. Designers and clinicians, rather than seeking agreement on what is meant by a particular room name, may now seek to agree on the actual or anticipated degree of aloneness or privacy a patient will experience in a room or space independently of room name and it is that agreement that will drive design choices for that room or space.

For example, a room such as a patient bathroom in which the patient is anticipated to be alone and have privacy would be far along the privacy axis. If that assessment intersects far along the patient intent for self-harm axis then the space should be designed with the attributes of a Level IV space as described below. In sum, no matter the name of the room, a high level of privacy warrants a high level of concern if it is anticipated that patients who are actively suicidal (or patients with an unknown or unassessed intent for self-harm) are to be treated or housed in that space. Some may also note that spaces with risk assessments located in the upper right (Level IV) of the risk map will have a more “institutional” look than spaces with a risk assessment located in the lower left (Level I) corner of the risk map (which may look more residential than the institutional spaces).

Although the authors believe that the use of such a tool will facilitate the necessary conversation regarding patient safety and design between operators, clinicians, and designers the tool is not an absolute and not intended to predict risk levels in a particular facility (which the authors believe to be dynamic and non-static). The tool is only intended to encourage a dialog and promote a common understanding of for whom a designed space is intended and the risks of an anticipated patient population. Neither should this proposal be interpreted as a suggestion that patient privacy is to be avoided or a risk to be avoided. Quite the contrary, privacy is generally considered a good thing and desirous in the built environment, but privacy has associated with it a risk that should be considered and mitigated though good design when possible.
Level I: Areas where patients are not allowed or under constant supervision such as staff and service areas

Level II: Areas where patients are highly supervised and not left alone for periods of time such as corridors, counseling rooms, activity rooms and interview rooms.

Level III: Areas where patients may spend time with minimal supervision such as lounges and day-rooms.

Level IV: Areas where patients spend a great deal of time alone with minimal or no supervision such as patient rooms (semi-private and private) and patient toilets

Level V: Areas that require special consideration where staff interacts with newly admitted patients that present potential unknown risks or where patients may be in a highly agitated condition. Due to the unknowns, these areas fall outside of the risk map and require special considerations for patient safety. Such areas include seclusion rooms, examination rooms and admission rooms.
3. **Outdoor Areas:**

Outdoor areas (e.g. enclosed courtyards, fenced areas adjacent to the treatment unit, or simply an open campus) are considered to be of great therapeutic benefit. Levels of staff supervision for patients using outdoor areas may vary widely between facilities or even between different groups using the space at any given facility and should be carefully reviewed by the facility and be dependent on the acuity and assessment of the most acute patients using the area.

In all cases, careful consideration should be given to exterior landscaping and furniture in the vicinity of patient-use buildings. Trees should be located away from buildings to prevent access to building roofs. Climbable fences can permit, if not encourage, unauthorized access to windows and roofs or elopement over walls. Shrubbery should be non-toxic and low-growing. Avoid planting shrubbery close together as it can create visual barriers that patients or unauthorized visitors may hide behind. Landscape or decorative rocks that can be thrown and injure staff or other patients should not be used.

All outdoor furniture should be anchored firmly in place. This is to prevent the furniture from being moved to create barricades or stacked to allow climbing over fences, into windows or onto buildings. There are many types of furniture commercially available that can be anchored or are made of concrete or other heavy materials.

Buildings, walls or fences may be used to establish clear boundaries and impede elopement to a degree appropriate to the patient population being served. Some facilities are comfortable with providing a perimeter enclosure that is not particularly difficult to climb and simply make any elopements a treatment issue if the patients return. Other facilities have a very high need to reduce elopements to the extent possible. Where this is the case, the enclosures may take on a very prison-like appearance. If views to the distance are not required, one approach is to treat the outdoor areas as meditation gardens with solid masonry walls that have a smooth interior surface and are twelve to fourteen feet high. One facility has installed large (22"-24") diameter plastic pipe on top of the wall to resist patients being able to get a grip on the top surface. This pipe can be painted to match the color scheme of the building and
provides a much less institutional appearance than concertina wire. If views to the distance are desired, “windows” glazed with polycarbonate\textsuperscript{201} or security glass\textsuperscript{200} may be provided. Care should be taken to not have sills or cross bars that will provide toe holds for climbing.

Another option is a fine mesh chain link fence fabric\textsuperscript{675} that can be installed over the existing fence material. This fabric comes in a range of sizes down to as small as 3/8” openings. This makes it more difficult to climb and the openings are too small for most bolt cutters. Care should be taken when using this material to assure that fence posts and rails are sufficiently strong to support the fabric and the additional wind loading that can occur. There has been at least one verified instance of a patient successfully climbing a mini-mesh fence, so it is suggested that a section at the top be angled inward to further increase the difficulty of climbing.

There are also maximum security fencing\textsuperscript{676} products available that have a very prison-like appearance, but may be necessary in some facilities with involuntarily admitted patients.

If portions of the building walls are used to enclose exterior courtyards for patient use, care should be taken that these walls are not easily climbable, especially if they are only one story high. Window sills, rain gutters, etc. may assist efforts to climb these walls to get access to the roof. All windows that patients will have access to from exterior courtyards shall have security glazing\textsuperscript{200} polycarbonate glazing\textsuperscript{201} or security window film\textsuperscript{190} (as discussed in Level 2.D below) for their exterior surfaces.

All areas surrounding patient-use buildings, areas where staff will be walking or escorting patients at night and courtyards should be well lighted. Care should be taken that exterior lights do not shine directly into patient room windows. Parking areas for staff and visitors should be well lighted and reviewed regularly for design features that encourage personal and property security. While security is generally beyond the intended scope of this document, closed circuit television monitoring and video surveillance recording of these semi-public areas (i.e., where there is no expectation of privacy) should be considered.

All manhole covers, access panels, and area drain grates should be anchored firmly in place to prevent them being removed and used as weapons or allowing patients to enter the underground piping.
NOTE: Product information included in this document is intended for illustration of one or more specific items that are deemed appropriate for use in this type of facility. Comparable products by other manufacturers meeting the same design criteria may be substituted after careful comparison.
CONSTRUCTION AND MATERIALS CONSIDERATIONS

Each of these levels of concern requires increasing attention to the built environment to reduce the potential of the patients being afforded a means of doing harm to themselves or others. These levels are cumulative, and all steps taken for lower levels are also required for a higher level. For example: all steps recommended for Levels 1, 2, and 3 are also recommended for Level 4.

Level 1. Staff and Service Areas – Comply with all applicable codes and regulations. All unattended service areas should be locked at all times to reduce the possibility of patients entering these areas.

Level 2. Corridors, Counseling, and Interview Rooms - Minimize blind spots in corridors where patients cannot be observed from an attended nurse’s station. All unattended counseling and interview rooms should be locked at all times to reduce the possibility of patients entering these areas. Counseling rooms and interview rooms should have a “classroom”-type lockset which requires a key to lock or unlock the outer handle, but the inside handle is always free.

A. Floors – Carpet or vinyl tile meeting class A rating. Avoid patterns and color combinations that may appear to “animate” into objects that could contribute to visual misperception by patients. Anti-microbial carpet with solution-dyed yarn and moisture-resistant backing generally works well in these facilities and is available from most major carpet companies.

B. Walls – Lightweight concrete block, abrasion resistant, and impact-resistant gypsum board230, 231 on a minimum of 20 gage metal studs spaced at 16 inches on center are appropriate for use in these areas. Sound deadening gypsum board232 is now available to help reduce noise levels created by traditional hard services. Consult manufacturers regarding the characteristics of the specific material most appropriate for a particular installation. These products are now available from several manufacturers. A painted finish is preferred because of easy reparable and the relatively low cost of renewing or changing colors to keep up with current trends. This helps with minimizing the institutional qualities of the space and aids in providing as residential (or home-like) an ambiance as possible while meeting the institutional requirements.
C. Ceiling – May be lay-in acoustic tile if needed for accessibility to equipment and the ceiling height is sufficient to make the tiles and grid system difficult to reach. However, a solid ceiling is always preferred in all areas of the Units, but especially interview rooms used for patient intake and assessment purposes (see section 5a: Admissions). If a “lay-in” ceiling is used, consideration should be given to the use of clipped-in-place ceiling tiles. If clips are used, regular safety rounds should include checking to see that the clips are in place. Frequently, they do not get replaced after maintenance is performed on equipment above the ceiling. Some facilities report installing motion sensors above lay-in ceilings to alert staff to patient activity above the ceilings.

D. Glass (Interior and Exterior) All glazing that is exposed in patient accessible areas should stay in the frames when broken and not yield sharp shards of glass that patients could use as weapons. Terminology can be confusing in that laminated glass like used in vehicle windows is often referred to as “safety glass”, but this will break into large sharp pieces. Some of the forms of glazing that are recommended for use in these facilities are listed below:

1. Standards - All glazing in patient accessible areas should be safety glass. The "Guidelines" Appendix A2.5-7.2.2.3(2) calls for, “…the anchorage of windows and window assemblies, including frames, shall be designed to resist impact loads applied from the inside and shall be tested in accordance with ANSI Z97.1. When operable windows are used the hinges and locking devices shall also be tested.” The Appendix to this section also calls for the glazing to pass, “The Dade County hurricane test, ASTM E1886, and ASTM E1996 as alternate impact tests.”

2. Impact Resistant Glass - Several glass manufacturers are now producing products that may be appropriate for use in these facilities. Actual products will vary depending on the size of the opening, the type of frame and the patient population being served. It is suggested that the manufactures be contacted directly to determine exact products that may be appropriate for a specific project.
3. Polycarbonate (Lexan) – Polycarbonate panels are highly impact resistant and are available in a variety of thicknesses from several manufacturers. It will also deflect upon impact and large pieces have been known to pop out of their frames. Care should be taken to assure that the depth of the stop securing the panel will retain it when subjected to strong impact near the center of the panel. This material is also highly susceptible to scratching and is a frequent target of patients to use to write profanity and draw pictures. Mar resistant coatings are available, but they do not completely eliminate this concern.

4. Heat Strengthened Glass – is more difficult to break than regular float glass but has about half of the strength of tempered glass. Heat strengthened glass may be a good choice if it is laminated and high impact resistance is not required for the specific location.

5. Tempered Glass – this may be acceptable for use in some patient accessible areas such as small windows in doors, portions of glass walls separating activity rooms from corridors and patient toilet room mirrors. Tempered glass is more impact resistant than float glass or laminated glass, but will break into many small pieces and each piece may have sharp edges. Patients have been known to break tempered glass mirrors and rub the inside of their wrists on the broken surface to cut themselves. The hazard of this may be reduced by covering the tempered glass with a security film as described below.

6. Window film - If replacing existing glass is cost prohibitive, application of a window film security laminate to existing glass may be an alternative. However, these films may be susceptible to scratching and being defaced by patients, but may be removed and replaced at less cost than replacing glass or polycarbonate panels. Additional protection may be obtained by using impact protection adhesives and a perimeter tape system to help hold the glass in the frame if broken. Claims that these window films will prevent the glass from breaking should not be relied upon in these authors’ opinion.

7. Wire Glass will break and yield sharp shards of glass and is required by some codes in fire rated situations. The installation of polycarbonate or security film on side(s) to which patient has
access will provide protection for the patient if this is allowed by authority having jurisdiction.

8. Observation mirrors - Convex mirrors installed in corridors, seclusion rooms, and other locations to assist with the observation of patients that are in locations accessible to patients should be made of a minimum 1/4" thick polycarbonate, be filled with a high-density foam, and have a heavy metal frame that fits tightly to the wall and ceiling. Convex mirrors made of steel are also available. Additionally, the perimeter should be sealed with a pick-resistant caulking.

E. Doors in behavioral health facilities are subject to heavy use and possibly extensive abuse. They make up a significant percentage of the exposed wall surface in corridors and have a strong visual impact on these spaces.

Painted steel doors are durable, easily touched up or refinshed, but very institutional in appearance. Doors with wood veneer faces and stain and varnish finish are more “residential” in character, but are easily damaged and difficult to repair. Plastic laminate covered doors are also easy to chip on the edges and may soon become unsightly. One response to the damage these doors receive is to add stainless steel kickplates, door edges and other add on devices which also add to the institutional look. (NOTE: The installation of kickplates may invalidate the fire rating of doors in some jurisdictions.) The kickplates and other protective devices are available in durable synthetic materials that come in a variety of colors that soften the stainless steel look but can still result in a patchwork quilt appearance.

One possible solution to this is a durable door with wood grain appearing synthetic faces and removable end caps which can be replaced if they become damaged for much less expense than replacing the entire door. First cost may be comparable if the expense of finishing the doors and purchasing and installing the kickplates, etc. are factored in. The life cycle cost can potentially be much less other doors and the appearance may be a significant improvement.

F. Hardware
1. Hinges – Continuous hinges are preferred for all patient-accessible areas because they minimize possible attachment points. Geared-type continuous hinges are available with a closed-sloped top and continuous gears that resist ligature attachment.111

2. Closers – Closers are generally not required for patient room doors in most jurisdictions, but may be required for other doors. When needed, it is suggested that parallel arm closers108 be mounted on corridor side of door away from rooms where patients will be alone or in groups.

3. Locksets – All doors in patient-accessible areas are recommended to have some type of ligature-resistant lockset. There are three ways that a lockset can be used for ligature attachment: pulling down, pulling up and over the top of the door, and tying something around the latch side of the door using both the inside and outside handles (transverse). The latchbolt itself has even been used successfully as an attachment point as has the opening behind the strike plate. In these authors’ opinion, the perfect solution for this dilemma does not exist at this time. Several of the better options are discussed below.
   a. Lever handle locksets130, effectively deal with up and down pressure, but are susceptible to transverse attachment. The lever should move freely in both directions when locked to reduce ligature attachment risks. This type of handle is more typical (less intuitional) in appearance and operation than other choices. Both of these qualities are very desirable in items that patients will touch and use on a regular basis. However, lever handles may present more risk that some of the other choices. These levers are generally considered to be Americans with Disabilities Act (ADA)-compliant.

   b. Crescent handle lockset136 is available which utilizes a lever handle and thumb turn that are ligature resistant and may meet ADA requirements. This is now available with a revised handle that can be mounted in a horizontal position and allows the user’s hand to easily slip off the free end.
c. Push/Pull Handle locksets installed with both handles pointing down resist pulling down and, to some extent, the transverse attachment. However, it is very susceptible to pulling up and looping something over the top of the door. This hazard can be reduced by installing an Over-the-Door Alarm as discussed later in this paper. This type of device is generally considered to be ADA-compliant.

d. Push/Pull hardware is also available with a flush push pad and on one side and a ligature-resistant pull handle on the other. This type of device may be ADA-compliant.

e. Modified lever handles which provide minimal ligature attachment risk, but have an unusual appearance and operating motion are also available in various designs.

4. Unit entrance doors – Provide intercom (or telephone) for communication to nurse stations from outside the unit if needed. Electronically controlled access systems that utilize electric strikes or electromagnetic locks are preferred. These may be operated by a switch at the nurse station if the door is clearly visible from the location of the release button. Care should be taken to assure that patients are not in the area when the door is released. Card readers or keypads adjacent to the door are also commonly used. These are readily available from hardware suppliers and are generally extensions of systems currently in place at most facilities.

5. All exit doors (including stairway doors) may generally be locked at all times in these facilities. Exit doors may be locked with electromagnetic locks that are connected to fire alarm system and may either stay locked when the fire alarm is activated (fail secure) or release when alarm is activated (fail safe) as deemed appropriate for patient population. The acceptability of this type of hardware and its operating mode should be verified with the authority having jurisdiction at location of the facility. When extraordinary circumstances exist, a vertical magnetic-jam strip with at least two
magnetic-hold devices should be considered as a minimum.

6. All doors on the unit:
   a. That are required by applicable codes and regulations to have a closer, but need to be open to provide observation of patients by staff shall be provided with a closer with a built-in release\textsuperscript{101} that will allow the door to close automatically when fire alarm is activated.
   b. That are in-swinging and will have patients in the associated rooms are recommended to have one of the barricade resistant methods discussed in “Level 4a” below.

7. Smoke seals are often applied with adhesive strips that can allow patients to remove them to use as ligatures. Smoke seals that break into 8” long pieces\textsuperscript{10} are preferred for use on all doors that patients will pass through.

8. Patient accessible Toilet Rooms and Shower Rooms that are located near Activity Rooms and other locations on the unit are recommended to have all of the features of the Patient Toilet Rooms as discussed in “Level 4b” below.

G. Light fixtures – If located at a height or location that is not easily accessible to patients, these may be normal fixtures and lamps as long as staff observation from the nursing station is good and staff are in attendance, but tamper-resistant fixtures are preferred. Where they can be reached by the patients or are in areas that are not readily observable by staff, they must be tamper-resistant type\textsuperscript{620} or have minimum ¼” thick polycarbonate prismatic lenses\textsuperscript{634} securely fixed in the frame and the covers must be firmly secured with tamper-resistant screws\textsuperscript{470}. No glass components should be used in any fixture. Use of table lamps or desk lamps is strongly discouraged. Neither incandescent light bulbs nor fluorescent tubes should ever be accessible to patients.
It has been suggested that corridor light fixtures (other than minimal night lighting) be controlled at night by motion detectors. This would allow staff to know immediately when a patient leaves his or her room.

H. Fire sprinklers – institutional heads which provide very little opportunity for attachment.

I. HVAC grilles and equipment:
a. Standard grilles with small perforations that are secured in place with tamper-resistant fasteners are generally acceptable in these areas as long as the ceilings are high enough to not be easily reachable by the patients.

b. If there are existing fan/coil units (as well as fin-tube heaters or old style radiators) present in these spaces, they should be protected with vandal resistant covers.

J. Window covering hardware –
1. Mini-blinds mounted between layers of safety glass or polycarbonate glazing are preferred because they are not accessible to patients. Care should be taken to assure that any exposed devices to control the tilt of the blinds not create a potential ligature attachment point. There are some commercially available window assemblies that have all of these features. Exposed mini-blinds should never be used.

2. Roller Shades that are specifically manufactured for use in psychiatric hospitals are another option. These have enclosed security roller boxes, security fasteners, cordless operation and locking devices that resist tampering by patients.

3. Curtains and curtain tracks of any type (including those designated as “break-away” and represented by their manufacturers as “safe for psychiatric hospitals”) are not recommended for use in any patient accessible areas, especially patient rooms and patient showers.
K. Miscellaneous –

1. No plastic trash can liners should be allowed in any space accessible to the patient. Breathable paper liners should be provided.

2. All operable windows in these areas should have opening limited to four inches.

3. Telephones located in corridors or common spaces for patient use should have stainless steel case, be securely wall mounted, have a non-removable shielded cord of minimal length (14 inches maximum), and may be equipped either with or without touch pads for placing outbound calls. It has been mentioned that if a patient pulls very hard on the receiver that the armored cable can unwind and provide sharp edges. This risk should be weighed against the ease of removal of standard cords.

4. Cabinet pulls should be either recessed, with no protruding openings or of a closed type.

5. Cabinet locks are very important in these, and all patient accessible areas. Cabinets that are used to store items that patients could use to harm themselves or others should be kept locked at all times when patients are present. This can lead to staff constantly looking for the right key on a large keychain. One solution is to provide locks that can be unlocked by using the existing key access cards now used by many facilities or a pushbutton keypad. These are becoming more affordable and should be particularly helpful in Examination/Treatment rooms and any locked cabinets in patient rooms.

6. Room Signs are available in a flexible material that is adhesively applied and will not provide a weapon to the patients if removed.
7. All fire alarm pull stations and all fire extinguisher cabinets\textsuperscript{521} should be locked. All staff on duty must carry keys for these at all times. Key should be provided with a red plastic ring or other means of providing quick identification. In addition, fire extinguisher cabinets should have continuous hinges, recessed pulls (if any) and polycarbonate glazing (if view windows are provided).

8. Lighted exit signs\textsuperscript{640} or Photoluminescent signs\textsuperscript{842} should be vandal-resistant and installed tight to the ceiling with a full-length mounting bracket to avoid use as a hanging device. Wall mounting these signs perpendicular to a wall is not recommended because it leaves the top exposed as a possible attachment point.
L. Furniture –

1. Should be easily cleaned, easily reupholstered, very sturdy and as heavy as possible to minimize likelihood of patients throwing chairs, tables, etc. It is recommended that as much furniture as practical be built-in or securely anchored in place to prevent stacking or barricading of doors. The remaining loose items (such as chairs) can vary from high-quality wood-fame upholstered chairs that resemble typical residential furniture in appearance to polyethylene rotationally-molded and sand-ballasted seating that is now available in a less institutional look. The selection depends on the facility’s determination regarding the patient population to be served.

2. Provide lockable storage cabinets and drawers and the means to lock phones and computers away from patients.

3. All upholstery and foam used in furniture should have flame spread ratings that comply with the requirements of NFPA 101 Section 10.3.

M. All pictures and art work must be given special consideration in patient accessible areas:

1. Hand painted Murals have been used very effectively in some facilities. These can be very effective in brightening and adding interest to corridors and day rooms. It is usually a good idea to cover them with at least two coats of a clear sealer for protection, but patients typically enjoy these and defacing them is not usually a problem.

2. Specially designed frames that slope away from the wall and have polycarbonate or acrylic glazing. The frames should be screwed to the walls with a minimum of one tamper-resistant screw per side. Care should be taken to reduce the opportunity of attaching ligatures to the frame or the joint between the top of the frame and the wall, especially when the surface of the wall is not be perfectly straight and gaps between the wall and frame are present. The joint at the top should be sealed with a pick-resistant sealant. Some of these frames also allow for easy replacement of the images and provide the opportunity for patients to customize what they are displaying with personal photos, etc.
3. Another option is to print art work on flexible vinyl\textsuperscript{201} that can be attached to the walls with low-tack adhesive or regular wall vinyl adhesive for more permanent installations. These reduce the risk of patients obtaining harmful materials. The low-tack adhesive used on smaller images also provides the opportunity to change the art displayed on a seasonal or other basis. It allows hospitals to give the patients a choice of art work to display in their rooms which can contribute to them having more control over their environment.

**Level 3. Lounges and Activity Rooms**

A. **Floors** - Use sheet vinyl\textsuperscript{245}, vinyl tile\textsuperscript{246} or seamless flooring\textsuperscript{250} where wet or potentially messy activities will be conducted. Carpet should broadloom or sheet carpeting and have anti-microbial solution-dyed yarn and non-moisture absorbing backing\textsuperscript{255}.

B. **Walls** - Same as for corridors in #2 above.

C. **Ceiling** – Prefer non-accessible solid gypsum board ceiling. If more sound attenuation is desired, apply 1’x1’ acoustic tile to the gypsum board with adhesive. A nine-foot-high ceiling is highly desirable in that the added height makes it more difficult to reach and therefore decreases patient tampering with ceiling-mounted devices.

D. **Glass** - Same as for corridors in #2 above.

E. **Hardware** - Same as for counseling and interview rooms in #2 above.

F. **Light fixtures** - Same as for corridors in #2 above.

G. **Fire sprinklers** – Institutional type – Same as for corridors in #2 above.

H. **HVAC grilles and equipment** – Only grilles with small perforations\textsuperscript{600} complying with the National Institute of Corrections standards,
   1. If other types exist and must remain, cover with heavy gauge stainless steel screen fabric\textsuperscript{81}.
   2. If individual fan/coil type units exist and must remain, secure all access panels, grilles and controls - Same as for corridors in #2 above.
I. **Window covering hardware** – Same as for counseling and interview rooms in #2 above.

J. **Furniture** – All lounge furniture requirements listed for counseling and interview rooms in Level #2 above apply to this level also. Where movable seating is required such as dining and activity rooms, polypropylene very light-weight chairs\(^{481}\) that resist breaking into sharp pieces are preferred. An alternative is a chair that can be partially filled with sand to make it difficult to throw or use as a weapon.\(^{480}\)

K. **Kitchen appliances**

1. All cooking appliances (ranges, microwaves, coffee makers, etc.) should have key operated lock-out switches\(^{611}\) to disable the appliance.

2. Patients’ access to coffee should be carefully considered by each facility’s Risk Management Program. If access to this (and other potentially scalding liquids) is allowed, the location of the coffeemaker should be chosen so it is readily observable by staff. Glass coffee pots should never be available to patients. Insulated plastic dispensers are preferable.

3. All garbage disposal units should have a key operated lock-out switch\(^{611}\) to disable the device.

4. GFCI-protected receptacles must be provided near all sources of water including sinks and are recommended for all patient accessible receptacles.

L. **Miscellaneous**

1. All electrical device (switches, outlets, etc.) cover plates must be attached with tamper-resistant screws\(^{470}\). Electrical cover plates for switches and receptacles should be made of polycarbonate\(^{612, 613}\) materials and secured with tamper-resistant screws.

2. All Miscellaneous requirements listed for counseling and interview rooms in Level #2 above apply to this level also.
3. Television – TV sets should not be mounted on walls using brackets because of the risk presented to patients. All cords and cables should be as short as possible. Consideration should be given to providing built-in TV or media centers and installing an isolation switch that staff can control. Manufactured covers with sloped tops are now available to fit a variety of TV set sizes. For maximum safety, the electrical outlet and cable TV outlet should be located inside the cover to keep the wires and cables away from the patients. One facility utilized unused platform bed frames mounted vertically on the wall to house television sets and conceal all wires and cables.

**Level 4a. Patient Rooms**

**A. Floors** – Same as lounges and activity rooms in #3 above. If some of patient population have problem with urinating on the floor, provide some rooms with seamless epoxy flooring with integral cove base or sheet vinyl flooring with integral cove base.

**B. Walls** – Impact and/or abrasion resistant gypsum board on metal studs – paint finish preferred.

**C. Ceiling** - Non-accessible solid gypsum board ceiling - paint. Provide key-lockable access panels at all locations where access is required. If doors do not fit tightly, or on larger panels, it may be necessary to provide tamper resistant screws in the corners of the panels.

**D. Doors** – Patient Room to Corridor Doors present the possibility of patients barricading themselves in their rooms to delay staff members’ access. One solution is to hinge the door so that it swings into the corridor (which may create its own problem with the Life Safety Code and applicable building codes). However, this may (depending on the design) result in the creation of an alcove that is difficult to observe and which patients may use as hiding places from which to attack staff or other patients. If these doors are mounted to swing into the Patient Rooms, there are several other barricade solutions that may be provided:

1. The door-within-a-door (sometimes referred to as a “wicket” door) has a portion of the center of the door hinged to swing into the corridor. This hinged panel is
mounted on a continuous hinge and the panel is secured with a deadbolt lock.

2. If space is available, a separate narrow (18”-24”) wide door that swings into the corridor may be used for emergency access to the room. This smaller leaf can either be mounted in the same frames as the main door in a “double egress” configuration, or there can be a Mullion77 between the two leaves.

3. Double acting continuous hinges113 can be used on patient room to corridor doors to assist with barricading without the hazard presented by pivot hinges. They are also available with a full height emergency stop115 which locks in place and can be easily unlocked to allow the door to swing into the corridor.

4. Integral system doors30 are available that have a nearly flush push plate on the outside that releases the continuous latch bar and a tapered pull handle that releases the latch bar from the other side. A recessed-pull handle121 is necessary on the push side to aid in closing the door. These doors come as an assembly including the door itself, lockset and a continuous hinge. This assembly is very resistive to upward, downward and transverse attachment. This product is also available with an “Emergency Release Hinge” that can be unbolted and allows an in-swinging door to be pulled into the corridor in the event that it is barricaded. A standard latchbolt is not used with this system, but the top of the latching bar may still provide an attachment point. Maintenance staff may need to be available on all shifts to remove this door if required for emergency access.

The top of all tight-fitting doors provides a pinch point that allows a patient to tie a knot (in a sheet, the leg of a pair of jeans or other object), place it over the top of the door, and close the door. This provides a hanging device. One way to reduce this risk is with a pressure-sensitive device placed on the top of the door that sounds an alarm156.
Some facilities have begun to address a desire of some patients to lock themselves in their rooms to avoid unwanted entrance by other patients. The challenges with this are to provide individual security for the patient without restricting access to the room by staff. Locksets with specialized locking functions and ligature resistant turnpieces for the inside of the door are now available. A cylinder protector to cover the lock cylinder on the corridor side of the door resists attempts to insert objects in the keyway. Options are also available to control these locks with card access technology.

E. Glass

1. **Exterior windows** – (See Level 2.D.1 Safety Glazing above.) Advances in different types of safety glass make it worthwhile to consult an expert for advice for any specific project. The height above the ground, patient population and many other factors should be taken into account in making these decisions. Comply with all applicable codes and regulations for operable sash. Fixed windows or units equipped with sash control devices that limit amount of opening and can be released using a key to full opening for evacuation purposes are preferred.

2. **Security screens** - If replacing the windows presents a prohibitive cost in remodeling work, provision of a security screen with a very sturdy steel frame designed to resist deflection with multiple key locks and equipped with heavy gage stainless steel screen fabric may be used. These are very functional and secure, but create a very “institutional” appearance and can be defaced by writing obscene words with toothpaste (or other material).

3. **Mirrors** – Radiused stainless steel framed security mirrors are preferred for patient-room mirrors, and the reflective surface may be polycarbonate, tempered glass, stainless steel, or chrome-plated steel. Each has durability and distortion characteristics. Some framed mirrors will have a flat surface on top and/or not fit tightly to the wall and provide opportunities for
ligature attachment. When this occurs, a tapered strip may be installed to reduce this risk.

4. View windows to corridors in doors or sidelights
   – Use polycarbonate (if possible). If wire glass is required by codes, request permission from the authority having jurisdiction to install a layer of polycarbonate on each side of the wire glass. (Wire glass can be broken and yield shards of glass that can be used as weapons.)

View windows in Patient Room to Corridor doors create some conflicting issues. One view is that they are necessary to provide observation by the staff. The other point of view is that the windows infringe on patient privacy in that anyone, including other patients can see into the room. One solution to this is to provide an operable blind that only staff can control from the corridor side.

F. Hardware – See comments under Level 2 E above. It is highly desirable to keep vacant patient rooms locked at all times to avoid other patients entering these rooms without staff’s knowledge. Many jurisdictions do not allow the capability of locking a patient in a room. Therefore, “classroom”-type locks are recommended. These can always be opened from the inside, and the corridor side may be either locked or unlocked with a key.

G. Light fixtures – Same as in Level 2 above except that all light fixtures should be security-type fixtures. The use of 2’x4’ fluorescent light fixtures creates a very commercial or institutional appearance to patient rooms and the placement of one of these directly over the bed is a carryover from general hospital design that is seldom needed in behavioral health facilities. Preference is for using either round or oval surface mounted, vandal-resistant fixtures for general illumination and recessed security downlights with polycarbonate lenses over the beds for reading lights.

Covers are available for existing (or new) downlights that are secure and make the appearance more residential in nature.

No glass components should be used in any fixture, and table lamps and desk lamps are strongly discouraged.
H. **Fire sprinklers** – Institutional type – Same as for corridors in Level 2 above.

I. **HVAC grilles and equipment** –
   1. Fully recessed vandal-resistant grilles with S-shaped air passageways 602,603 are recommended for all ceiling and wall-mounted grilles.
   2. In new construction or major remodeling, locate individual room HVAC equipment (such as fan/coil units) in an adjacent corridor or in other location (such as an interstitial space) where they can be serviced without entering the patient’s room.
   3. In existing facilities that have units located below the windows, care should be taken to secure all access panels with tamper-resistant screws. All supply and return air grilles should also be covered with perforated grilles or stainless-steel screen fabric.

J. **Window covering hardware** – Same as for counseling and interview rooms in Level 2 above.

K. **Furniture** –
   1. **Furniture** – Sturdy wood, thermoplastic or composite furniture should be bolted to the floor or walls whenever possible. Care must be taken to assure that the furniture will withstand abuse, will not provide opportunities for hiding contraband, and will resist being disassembled to provide patients with weapons.

   Open-front units with fixed shelves and no doors or drawers 495 are recommended. Doors should not be provided because they can be used by patients to hang themselves. Drawers should not be provided because they can be removed by the patients and broken to use as weapons. If drawers and doors are provided, they should be lockable, and the keys should be controlled by staff. They should have pulls that are ligature resistant 460 that cannot be used for ligature attachment, and the doors should have continuous hinges. All upholstery and foam used in furniture and mattresses should have flame spread ratings that comply with the requirements of NFPA 101 Life Safety Code, Section 10.3.

   Desk chairs are preferred to be light weight 481 or ballasted 480 as discussed in Level #3 above.
2. Beds –

a. **Non-adjustable platform beds** without wire springs or storage drawers are needed. It is recommended that these beds be securely anchored in place to prevent patients from being able to use them to barricade the door. If use of a portable lifting device is needed, beds are available with an opening under the bed to accommodate the legs of the lift. Portable lifts can also be accommodated by placing an existing platform bed on a specially designed riser. This also reduces the amount of bending over that staff need to do to work with the patient.

b. **Mattresses** for platform beds should be specifically designed for use in these facilities and be resistant to abuse and contamination.

c. If medical necessity is present, **manual hospital beds** are preferred. It is recommended that the wheels of hospital-type beds be removed or rendered inoperable to reduce the opportunity of using them to barricade the door. It should be noted that the bed rails, headboard and footboard all present hazards for these patients.

d. If **electrically operable beds** are needed to reduce risk of staff injuries (especially on geriatric units), new beds are available that are specifically better suited for use on these units than standard electrically adjustable hospital beds. These beds will sense obstructions and reverse direction, have lockout features for the controls, reduced length cords and other tamper resistant features.

e. If existing beds must be used for financial reasons, use only beds that require a constant pressure on a switch located on the bed rail (not a remote control device or paddle that can be placed on the
floor). If existing electric beds are to be used, provide key lockout switches on beds (or removable pigtail) so that only staff can operate the beds. All electrical cords should be secured and shortened. Key lock-out switch is preferred. It is recommended that the wheels of hospital type beds be removed or rendered inoperable to reduce the opportunity of using them to barricade the door. It should be noted that the bed rails, headboard and footboard all present hazards for these patients.

3. Wardrobe

Wardrobe units should not have doors and should have fixed (non-adjustable) shelves. They should be securely anchored in place and have sloped tops. Wardrobes with clothes poles requiring hangers are discouraged because, while the bar itself can be made safe, the hangers themselves present serious hazards. It should be noted that the current (2010) edition of the “Guidelines” no longer calls for patient rooms to have accommodations for “hanging full length clothing”. The average length of stay in many facilities is now in the 7- to 10-day range, and patients no longer come with clothing that needs to be hung up.

L. Miscellaneous –

1. **Pull cords** on nurse call and/or emergency call switches (where required or provided) shall be no longer than 8” and as lightweight as possible.

2. All Miscellaneous requirements listed for lounges and activity rooms in Level #4 above apply to this level also.

3. In new construction, or major remodeling, provide a **dedicated circuit for all electrical outlets in each patient room and bath**. This will allow power to the outlets in a specific room to be turned off if necessary for patients’ safety. Where this is not practical, the outlet may be temporarily covered. It is strongly recommended that all electrical outlets in patient rooms and patient toilet rooms be hospital grade, tamper-resistant type. It is also preferred that they be GFCI receptacles to greatly reduce the risk of patients being able to harm themselves by tampering with the receptacles.
All electrical switches and outlets should be made of polycarbonate to reduce the risk of being broken to obtain access to the wiring or to obtain sharp pieces of plastic and they should be secured with tamper resistant fasteners.

4. **Coat hangers** are not recommended. There are some made of cardboard, but (when several of them are grouped together) they can hold the body weight of some patients.

5. **Curtain cubicle tracks** should be prohibited because of the risk to patients.

6. **Telephone** – If desired, cordless phones may be provided to allow the patient to check out a phone for private conversations when appropriate. Phones should not be left in patient rooms permanently because they can be used as weapons.

7. **Television sets** should not be provided in patient rooms to encourage patients to use activity areas with other patients and allow easier supervision.

8. **Medical gas outlets** – These are not normally required for behavioral health units. If there is medical necessity or the outlets are a pre-existing condition in remodeling projects, they should be covered with panels that are lockable or are attached with tamper-resistant screws. These should be removed only for medical necessity of the current patient and replaced when that patient is discharged or moved. Special care must be taken in semi-private rooms to assure that access to the medical gasses does not present a safety risk to the other patient. Some manufacturers can provide these lockable covers for their outlets.

9. **Trash cans and liners** – Trash cans and liner requirements listed for counseling and interview rooms in Level #2 above apply to this level also. In choosing trash cans and liners, the potential for patient risk should always be assessed. Plastic liners should be prohibited because of their potential risk of suffocation. A substitute liner made of paper may be used.
10. **Baseboards** that are made of rubber or vinyl and are thin, flexible and applied with adhesive only that are intended to cover the joint between the wall and floor is strongly discouraged. They become prime targets for patients to tamper with and can be used to conceal contraband.

Finishing the wall surface to the floor, sealing the joint with pick-resistant sealant\(^\text{20}\) and painting a contrasting color stripe at the floor is preferred. There are several alternatives for locations where finishing the wall material to the floor is not practical.

a. Seamless epoxy flooring\(^\text{250}\) that has an integral coved base is an exception to this as long as there is no metal edge strip on the top of the base.

b. Premolded base\(^\text{240}\) that extends onto the floor plane and finishes flush with the top of the floor tile and is heat welded to the flooring may be acceptable in some locations, but does not address the issue of hiding contraband unless the top edge is sealed with a pick resistant sealant\(^\text{20}\).

c. Rubber base that is thicker and resembles wood base profiles\(^\text{241}\) is available and provides a more “residential” appearance. It is suggested that all joints to the wall floor and vertical joints be sealed with a pick resistant sealant\(^\text{20}\).

d. In some cases wood-base material of a minimum ¾” thickness that is adhered to the wall, secured with countersunk tamper-resistant fasteners, and sealed with pick-resistant sealant\(^\text{20}\) has been used successfully. If desired, this can be given a semi-transparent stain finish to provide more of a residential look.
Level 4b. Patient Toilets

A. Floors – Use one of the following depending on acuity of patient population:

1. Seamless epoxy flooring\textsuperscript{250} with slip-resistant finish and integral cove base including shower. Do not use metal or plastic strip at top of base as this can be removed by patients and used as a weapon.

2. Ceramic and porcelain tile may be used as long as larger pieces are provided to reduce the number of joints and it is maintained in good condition.

3. One piece floor units\textsuperscript{566} are now available that provide a monolithic floor (European style) for the entire patient toilet room that drains the shower to a central location and, if used in conjunction with location of the shower enclosure and shower head can eliminate the need for shower curtains.

4. Solid surface material floors are also available that include a trench drain\textsuperscript{565} across the entire front opening of the stall which not only helps control water from getting into the room, but also makes the drain more difficult for patients to intentionally clog. Fiberglass shower stalls and floors are generally not durable enough.

5. Pre-Built Bathrooms\textsuperscript{568} that contain all finishes, fixtures and accessories are available that can reduce construction time because they are shipped to the site ready to be connected to the utilities.

B. Walls - Use one of the following depending on acuity of patient population and budget.

1. Avonite\textsuperscript{320} solid surface type sheet material
2. Ceramic or porcelain tile in large pieces.
3. Gypsum board that is impact-resistant with mold- and moisture-resistant facing\textsuperscript{230} with epoxy paint and solid surface sheets in shower.

C. Ceiling – Gypsum board with mold- and moisture-resistant facing\textsuperscript{230} with epoxy paint.
D. **Glass** – Mirrors, same as patient rooms in #4 above.

E. **Door** –
1. **“Soft Suicide Prevention Door”** (SSPDoor)\(^41\) has been developed that eliminates many of the hanging hazards associated with a typical door. The door is attached by magnets and may be easily removed by staff and used as a shield against an attacking patient and can have a photograph printed on its faces. This door cannot be locked or latched in any manner. (Use of this product eliminates the need for the items listed under “Hardware” below.)

2. **Sentinel Event Reduction Door\(^40\)** (without movable top panel) is another option. Privacy for two patient rooms can be improved slightly by installing the door a little higher than normal.

3. **Acrovyn Patient Safety Door\(^42\)** is similar to the item above but is available in finishes to match other Acrovyn doors if they are used on the unit.

4. A similar result can be obtained by using a **solid-core wood door**, cutting the top at an angle, and mounting it so there is a large gap at the bottom\(^43\). A stainless steel channel probably will need to be installed at the cut edge on top, and the door should be mounted on a continuous hinge\(^111\) and provided with a ball latch\(^145\) and recessed pulls\(^121\) on both sides.

4. Some facilities with single patient rooms are electing to remove the doors entirely from the patient toilet rooms. The practicality of this depends on the sight lines into the toilet room from the corridor door.

5. If there is a need to be able to lock patients out of the toilet room, a full door will need to be installed with similar hardware as described above and with a classroom function lockset. With the tight-fitting door, an over-the-door alarm should also be provided.\(^156\)

F. **Hardware** - See Level 2 E above.

G. **Light fixtures** – Same as patient rooms in Level 4 above except that fixtures shall be water-resistant type with a sealed polycarbonate lens. No glass components should be used in any fixture.
H. **Fire sprinklers – institutional type** – Same as for corridors in Level 2 above.

I. **HVAC grilles and equipment** – Fully recessed vandal-resistant grilles with S-shaped air passageways.

J. **Miscellaneous**

1. **Medicine cabinets** should not be provided because of difficulty in observing potentially dangerous items that may be placed in them.

2. Evaluate the risk of using **robe hooks**. If they are required, they should be the collapsible type.

3. **Towel bars** should not be used. Provide collapsible hooks for towels.

4. **Grab bars** for toilets and showers are preferred to be provided in all patient accessible toilets because some patients may be on medications that interfere with their equilibrium. A self-draining bar may be installed on a slight slope with one end cap on the higher end. These provide a high degree of safety and are also easy to clean and sanitize. If the wall surface behind the bar is not smooth and flat, provide pick resistant sealant to this joint between the bar and the wall.

5. **Vertical grab bars** are required or desired in some locations and these ligature resistant bars can typically be grasped only from one side, not both. There is now a ligature resistant grab bar that is specifically designed to be mounted vertically and can be grasped from either side.

6. Shower Curtains and curtain tracks of any type (including those designated as “break-away” and represented by their manufacturers as “safe for psychiatric hospitals”) are not recommended for use in any patient accessible areas, especially patient showers. In new construction, showers could be designed to contain the spray within the compartment without the use of a curtain. In existing facilities, the use of a Soft Suicide Prevention Door door mounted with a minimal gap between the bottom of the door
and the floor may be used for a 36-inch or narrower openings.

7. **Pull cords** on nurse call switches (where required or provided) should be push button type that are ligature resistant or have cords that are no longer than 4” and as lightweight as possible.

8. **Lavatories** – Vanity top-type lavatories\(^{541}\) are preferred because they provide the patients a place to set their toothbrush, etc. and have a more residential appearance. The enclosure below should have an access panel that is secured with tamper-resistant screws in lieu of a door. This enclosure can be designed to be wheelchair-accessible, if needed.

Wall-hung solid surface lavatories are available that make it very difficult to tie anything around them.\(^{540}\) These have an optional filler panel that is recommended to fill the space between the side of the fixture and an adjacent wall when there is one near the fixture. Stainless steel or high impact polymer pipe covers that fit beneath the unit are also available and should be provided. If a wall mounted lavatory is used, a shelf (surface-mounted or recessed)\(^{370}\),\(^{371}\) that limits attachment of a ligature may be needed to hold toiletry items.

10. **Lavatory and sink faucets and valves** provide attachment points for ligatures. A lavatory valve unit is now available that uses a shower valve fitted with a ligature resistant handle\(^{574}\) to allow patients control over the temperature (thermostatically limited to prevent scalding) and duration of the water flow. This valve can be used to replace the motion sensor activation of some of the faucets below. Faucets are available in a variety of materials and configurations that range from push button to motion sensor activation.\(^{570}\)
11. All lavatory waste and supply piping must be enclosed and should not be accessible to patients. Extreme care should be taken when doing this that the material is trimmed to fit tightly to the underside of the lavatory fixture to prevent the patient from using this to hide contraband.

12. Soap dishes should not have handles and should be recessed.

12. Disposable sheets of paper that are impregnated with anti-bacterial soap and shampoo are available in packets of 30 sheets that can be given to patients as an option to using either liquid or bar soap.

13. Many facilities are now using liquid soap in patient areas. The hard plastic dispensers in use in many facilities are problematic in that they can fairly easily be pulled off of the wall and broken to provide sharp shards that can be used as weapons. One solution is a dispenser that is made of solid-surface material that is commonly used for countertops and is relatively tamper-resistant. There are some commercially available stainless steel dispensers that are reasonably ligature-resistant.
14. **Toilets** used by these patients in new construction should be floor mounted, back outlet, back water supply type in lieu of wall-mounted fixtures which can be broken off of their hangers. These are also available in ADA handicapped accessible fixtures where required. Where wall-hung toilets exist and replacing them is not practical, a wall-hung toilet support can be used if it can be secured in place so that patients cannot remove it to use as a weapon. Movable seats provide attachment points for ligatures and should be considered carefully by each hospital. The solution is to use a fixture with an integral seat as suggested above. Some facilities feel this is too prison-like and choose to accept the risk of the movable seat. China fixtures themselves can be broken (both floor- and wall-mounted) and yield large, sharp shards.

15. **Toilet fixtures made of solid surface material** and stainless steel are available and are much more resistant to breaking. The stainless steel fixtures can be powder-coated for a less “institutional” appearance. Toilet fixtures that will support the weight of bariatric patients are also available to withstand loads in excess of 2,500 pounds.

16. Patients in behavioral healthcare facilities have been known to use various materials to attempt to clog toilets. There is now a product to help simplify the removal of the material clogging the waste lines. This in installed in the waste line immediately adjacent to the fixture and is intended to catch the material at that location so it can be removed more easily by maintenance staff.
17. **Flush valves** are preferred to be recessed in the wall\(^{580}\) and activated by a push button\(^{581, 582}\). Where this is not practical, the flush valve and/or all related pipes should be enclosed with a stainless steel\(^{584}\) or plastic\(^{584}\) cover that has a sloped top that incorporates a push-button activator for the valve.

16. **Toilet Paper Holders**
   a. Fully recessed\(^{400}\) stainless steel units. These have been used widely for a number of years, however, some facilities feel this creates an infection control problem because the users have to handle the entire roll.

   b. Another toilet paper holder available uses a bar that pivots down\(^{402}\) when vertical pressure is imposed.

   c. Solid surface holders\(^{403}\) are available that use a foam tube to hold the roll. The manufacturer will provide extra foam tubes at no charge when needed.

   d. A newly available dispenser\(^{404}\) securely encloses the roll, is ligature resistant and is designed to always have the paper tear off outside the cabinet. It is available in several sizes to accommodate different size rolls.
17. **Shower Control Valves** - NOTE: Provide **thermostatically limited hot water** to prevent accidental or intentional scalding in all patient-accessible toilet rooms.

a. Single knob mixing valves that provide minimal opportunity for tying anything around are preferred\(^{552}\). These give the patients control of the water temperature and duration of flow.

b. If it is only necessary to replace the valve handles and the valve itself is working properly, a replacement valve handle\(^{553}\) that can be adapted to a variety of valves might be considered.

c. If an ADA handicapped accessible valve is needed, the infrared-controlled, “no touch” valve\(^{551}\) provides a range of water temperatures and the duration of flow.

d. One piece units that contain shower head and push button valves as a recessed soap dish\(^{560}\), \(^{561}\) are available and work well for remodeling projects because they reduce the amount of repair needed for wall finishes. These are also available with removable hand held shower heads if needed for ADA purposes. The hand held shower heads should always be removed after every use and the bracket for mounting the hand held shower head should not be provided. The two button models provide some control of temperature, but does not allow control of the duration of water flow.

18. **Shower heads** should be institutional type\(^{550}\) and quick disconnect fittings should also be ligature resistant. If a hook is provided to hold the hand held shower head, it should be mounted on the part of the fitting that is removed when the hose is removed.

19. If a **divertor valve** is needed to change the water flow from the standard shower head to the hand held head, a ligature resistant diverter valve\(^{557}\) should be provided.
20. **Shower seats** that fold away typically have many tubes and brackets that are hazardous. If a folding shower seat is necessary, one without the tubes and brackets is suggested.

21. **Shelves** to hold miscellaneous items are often requested in shower stalls. A stainless steel suicide-resistant shelf may be considered for these applications.

22. **Paper towel dispensers** in patient-accessible toilets are a concern if they have sharp edges and are not securely constructed. Some commercially available tri-fold dispensers are acceptable in locations where high abuse is not anticipated.

23. **Existing tri-fold paper towel dispensers** may be left in use if desired and covered with a heavy-duty secure cover.

24. Provide ground fault circuit interrupter (GFCI)-type electrical circuit breakers for all receptacles near sources of water such as lavatories, toilets, and showers.

**Level 5a. Admissions** (especially emergency admissions which frequently occur at night and on weekends). A separate room that has direct access from both outside and inside the unit should be considered for this purpose. This allows for the patient to be brought directly into the admissions area without entering the unit directly. At admission, unit staff members know very little about the new patient and his or her trigger points. A separate room avoids disrupting either the unit or the patient, due to the agitation of either. This room should be pleasant and welcoming and should be minimally furnished (with a minimum of loose pieces of furniture). The room should be large enough to allow for several staff to physically manage the patient if necessary. If possible, the admitting staff member should not be in the room alone with the patient. After the admitting process is complete, the patient can be taken through the second door and directly onto the unit.

A. **Floors** - Same as activity rooms and lounges in Level #3 above.

B. **Walls** - Same as patient rooms in Level #4 above.

C. **Ceiling** - Same as patient rooms in Level #4 above.
D. **Glass** –
1. Same as in Level #4 above.
2. Provide small (12”x12” or 4”x24”) view window in door to patient unit.
3. If privacy is desired on occasion, panels are available that can be changed from 50% transparent to 100% frosted by turning a key or concealed mini blinds may be used.

E. **Hardware** - Same as in Level #4 above.

F. **Light fixtures** - Same as in #4 above.

G. **Fire sprinklers – institutional type** – Same as in Level #4 above.

H. **HVAC grilles** - Fully recessed vandal-resistant grilles with S-shaped air passageways.

I. **Window covering hardware** – Same as in Level #4 above.

J. **Miscellaneous** –
1. All Miscellaneous requirements listed for corridors in Level 2 above apply to this level also.
2. An emergency call button should be provided so the staff may summon additional staff if necessary.
3. “Baseboards” same as patient rooms in Level #4 above.

K. **Furniture** –
1. This room should have a built-in desk or table that is firmly attached to the floor or walls and contain a lockable file drawer for forms and a lockable box drawer for pens, pencils, staplers, etc. All loose items should be kept in drawers and out of sight. The furniture arrangement should locate the patients’ chair so that the patient, when seated, will not be between the staff member and the door.
2. The computer, printer, and telephone should be located so they are not easily reached by the patient.
3. Seating should be fixed in place or heavy-weight as discussed above.

**Level 5b. Seclusion Rooms** – should be no less than 7 feet wide and no greater than 11 feet long and designed to minimize blind spots where patients cannot be observed by staff without entering the room. A minimum of a 9’ ceiling height is preferred. The distance of the seclusion room from the nurse’s station needs to be considered. The goal is to avoid excessive distance so that staff can be readily available as needed. The seclusion room door should open directly into an Anteroom to separate these activities from the other patients as well as provide access to a patient toilet to be used by these patients without entering the corridor.

A. **Floor** – Continuous sheet vinyl with foam backing and heat-welded seams.

B. **Walls** – Impact resistant gypsum board over ¾” plywood on 20 gauge metal studs at 16” on center with high performance finish. If wall padding is desired, a Kevlar-faced or a heavy, heavy vinyl material with a 1 1/2” thick foam backing may be considered.

One facility has encountered issues with regulating authorities when using plywood for this purpose and has substituted 25 gauge sheet metal which stiffens the wall, is easily cut and does not require wider door frames.

C. **Ceiling** – Impact resistant and/or abrasion resistant gypsum board, painted at 9’-0” minimum height.

D. **Glass** – All glazing exposed to patients should be same as Level 2D above. This includes the exterior pane of any window accessible to patients from exterior courtyards.

E. **Hardware** –

1. **Doors** – Commercial-grade steel doors that have a minimum clear width of 3’-8’ and are hinged to open out of room with a polycarbonate view window not to exceed 100 square inches.

2. No exposed door hardware in the room.
3. The Anteroom side shall have three point latching which may be individual bolts\textsuperscript{162} or included in one piece of hardware with a single lever to operate all three.\textsuperscript{160} Consideration should be given to whether the facility wants to have hardware that latches immediately upon the door being closed or manual motion that is required to latch this door. If the door is self-latching, there may be increased risk of staff becoming locked in the room with a patient and a keyed cylinder may be required on the inside of the door.

F. \textbf{Light fixtures} – Fully recessed, moisture resistant, vandal resistant type light fixtures\textsuperscript{620} in the ceiling are recommended.

G. \textbf{Fire sprinklers–institutional type} – Same as for in Level #4 above.

H. \textbf{HVAC grilles} –
   1. Fully recessed vandal-resistant grilles with S-shaped air passageways\textsuperscript{602}.

   2. \textbf{Thermostats} should be digital-type mounted on wall in Anteroom with sensors in return air ducts serving the room.

I. \textbf{Window Covering} – No window covering material or hardware should be accessible to the patient. All window coverings should be located behind safety glazing as described in Level 2D above. Mini-blinds, roller shades or other types of window covering may be used behind the safety glazing as long as only staff can operate the covering and no ligature attachment points are provided by the system. If electrically operated devices are chosen, controls should be located in the Ante Room.
J. Miscellaneous –

1. No electrical outlets, switches, thermostats, blank cover plates, or similar devices are permitted inside these rooms.

2. Toilets same as Toilets in Level 4B above or one piece stainless steel fixtures combining toilet and lavatory are preferred by some facilities.

3. Baseboards; No baseboards should be used in these rooms.

4. Install a convex mirror same as for glass in Corridors in Level 2 above. Locate the mirror in the upper corner of the room and opposite the seclusion room door. Make sure the mirror can be seen when viewing it from the window in the door. By installing this mirror, you are now providing staff with a 360-degree view of the room prior to opening the door. Care shall be taken to assure that the attachment is secure so the patient will not be able to remove it and have a weapon.
SUMMARY

Thoughtful consideration of these design elements and materials by design professionals and healthcare professionals can result in a very aesthetically pleasing environment, which will enhance the treatment process and help maximize safety for all patients, staff, and visitors. It is strongly recommended that wall-hung lavatories, 2’x4’ fluorescent light fixtures, paddle handle door hardware and many other items that are typically found in general hospitals **NOT** be used in behavioral health care facilities. The reasons that these are used in general hospitals typically do not exist in behavioral health care units. Their elimination will significantly reduce the institutional character of these facilities without increasing patient or staff safety. As stated in the introduction, this document is intended to represent best current practices, in the opinion of the authors, and does not establish minimum standards for these facilities.
APPENDIX

1a. Trash can liner

_Sani-Liner; Paper Trash Can Liner_
Sani-Liner ®
Wisconsin Converting
Green Bay, WI
1-800-544-1935
www.wisconsinconverting.com

1b. Trash can liner

_Weizel Security; SR851-S36 Breathable Trash Can Liners_
Weizel Security
800-308-362
http://www.securinghospitals.com/

10. Smoke Seals: Break-away

_DHSI, Door and Hardware Systems, Inc.; Cush-N-Seal with break-away anti-ligature option_

DHSI
17 Silver Street
Rochester, NY 14611
585-235-8543
http://www.dhsi-seal.com/

20a. Pick-Resistant Caulk

_Pecora Corporation; DynaFlex SC_
Pecora Corporation
165 Wambold Road
Harleysville, PA
800-532-6688
www.pecora.com

20b. Pick Resistant Sealants

_Surebond; SB-190 Everseal_
Surebond
3925 Stern Avenue
St. Charles. IL 60174
877-843-1818
www.surebond.com
25. Synthetic Door

*C/S Acrovyn Doors*
Construction Specialties.
3 Werner Way
Lebanon, NJ 08833
800-972-7214
http://www.c-sgroup.com/

30. Quick Release Hinge Door

*Total Door; Quick Release Hinge Door*
Total Door
6145 Delfield Dr.
Waterford, MI 48329
800-852-6660
www.total-door.com

40a. Patient Toilet Door

*Norva Plastics, Inc.; Sentinel Event Reduction Door*
Norva Plastics, Inc.
3911 Killam Ave.
Norfolk, VA 23508
800-826-0758
www.norvaplastics.com

40b. Patient Toilet Door

*Soft Suicide Prevention Door*
Kennon Products, Inc.
Sheridan, WY
307-674-6498
http://www.suicideproofing.com/

40c. Patient Toilet Door

*C/S Acrovyn Patient Safety Door*
Construction Specialties.
3 Werner Way
Lebanon, NJ 08833
800-972-7214
http://www.c-sgroup.com/
40d. Patient Toilet Door *Weizel Security; SR826-S44 SafeSupport SR Bathroom Door Assembly*
   Weizel Security
   800-308-362

44a. Wicket doors
   *Total Lock and Security; Wicket Door*
   Total Lock and Security
   11772 Westline Industrial Drive
   St. Louis, MO 63146
   314-298-3433
   [www.totallock.com](http://www.totallock.com)

44b. Wicket doors
   *C/S Acrovyn Doors*
   Construction Specialties.
   3 Werner Way
   Lebanon, NJ 08833
   800-972-7214
   [http://www.c-sgroup.com](http://www.c-sgroup.com)

44c. Wicket doors
   *Ceco Door; Step through Access Door*
   Ceco Door
   9159 Telecom Drive
   Milan, TN 38358
   888-232-6462
   [www.cecodoor.com](http://www.cecodoor.com)
47a. Security Sidelight

Curries Company; Security Sidelight
Curries Company
1502 12th St. NW
Mason City, IA 50401
641-423-1334
www.curries.com

47b. Security Sidelight

Ceco Door; Security Sidelight Unit
Ceco Door
9159 Telecom Drive
Milan, TN 38358
www.cecodoor.com

50. Access panel – lockable

J. L. Industries, Inc.; Standard SP Security Panel with mortise prep
J.L. Industries, Inc.
4450 West 78th Street Circle
Bloomington, MN  55435
1-612-835-6850
www.jlindustries.com

430a. Aluminum window with integral blind

Manko Window Systems; 2450 Storefront with hinged sash and integral blind
Manko Window Systems, Inc.
800 Hayes Drive
Manhattan, KS 66502
800-642-1488
www.mankowindows.com
430b. Aluminum window with integral blind

_Wausau Window Systems; 4000i-DT Psychiatric Windows with integral blind_

Wausau Window and Wall Systems
7800 International Drive
Wausau, WI 54401
877-678-2983
www.wausauwindow.com

434. Exterior Windows

_Britplas; Safevent Windows_

Britplas
Unit 18 Kingsland Grange
Woolston
Warrington
WA1 4RW
+44-1925-824317
www.britplas.com

80. Detention Security Screens

_Kane Manufacturing Corporation_

Kane Manufacturing Corp.
515 North Fraley Street
Kane, PA 16735
1-800-952-6399
http://www.kanescreens.com/

81. Stainless steel screen fabric

_McMaster-Carr; Type 304 Stainless Steel, Standard Grade Woven Wire Cloth_

McMaster-Carr Supply Company
P.O. Box 4355
Chicago, IL 60680-4355
1-630-833-0300
www.mcmaster.com
100. Security arm door closers

**LCN 4510T Series Security Track Closer**

Ingersoll-Rand
Architectural Hardware
LCN Division
P.O. Box 100
121 West Railroad Avenue
Princeton, IL  61356-0100
1-815-875-3111

http://us.allegion.com/brands/lcn/Pages/default.aspx

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101. Sentronic closer

**LCN Fire/Life Safety Series Sentronic closer**

Ingersoll-Rand
Architectural Hardware
LCN Division
P.O. Box 100
121 West Railroad Avenue
Princeton, IL  61356-0100
1-815-875-3111

http://us.allegion.com/brands/lcn/Pages/default.aspx

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110. Electromagnetic lock

**Dynalock Corp. series 2011 Full Size Series**

DynaLock Corporation
705 Emmett Street
P.O. Box 9470
Forestville, CT  06011-9470
1-877-DYNALOCK

www.dynalock.com

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111a. Continuous Hinges – gear type

**Hager – Roton Hinges, 780 Series**

Hager Hinge Company
139 Victor Street
St. Louis, MO 63104
800-255-3590

111b. Continuous Hinges – gear type

*Ives 112HD Concealed Continuous Hinge*

Ives
2720 Tobey Dr.
Indianapolis, IN 46219
877-613-8766


113a. Double Acting Continuous Hinge

*Weizel Security; 824-S60 SafeSupport SR Anti-Barricade Inswing DR Retro*

Weizel Security
800-308-362
http://www.securinghospitals.com/

113b. Double Acting Continuous Hinge

*Pemko Double Swing Hinge*

Pemko
P. O. Box 18966
Memphis, TN 38181
800-824-3018

http://www.pemko.com/assets/literature/documents/80038%20Double%20Swing%20hinge%20ERS%209.27.13%20FINAL.pdf

115a. Emergency Stop

*Weizel Security; SR824-S40 SafeSupport Anti-Barricade Hinged Stop*

Weizel Security
800-308-362
http://www.securinghospitals.com/
115b. Emergency Stop

**Pemko Double Swing Hinge**
Pemko
P. O. Box 18966
Memphis, TN 38181
800-824-3018

[http://www.pemko.com/assets/literature/documents/80038%20Double%20Swing%20hinge%20ERS%209.27.13%20FINAL.pdf](http://www.pemko.com/assets/literature/documents/80038%20Double%20Swing%20hinge%20ERS%209.27.13%20FINAL.pdf)

120. Door pull

**Ives Vandal Resistant Door Pull; VR910-DT**
Build.com, Inc.
282 Convair Ave.
Chico, CA 95973
877-613-8766
[http://us.allegion.com/IRSTDocs/Catalog/109105.pdf](http://us.allegion.com/IRSTDocs/Catalog/109105.pdf)

121a. Door pull, recessed
Stanley Hardware
480 Myrtle Street
New Britain, CT 06053
1-800-337-4393
[www.stanleyworks.com](http://www.stanleyworks.com)

121c. Door Pull, recessed
**Rockwood; D89 Heavy Duty Security Flush Pull**
Rockwood Manufacturing Company
300 Main Street
Rockwood, PA 15557
800-458-2424
[www.rockwoodmfg.com](http://www.rockwoodmfg.com)

130a. Ligature Resistant Lever Handle Lockset

**Stanley Hardware SPSL Anti Ligature Lockset**
Best Access Systems
Stanley Security Solutions
6161 East 75th Street
Indianapolis, IN 46250
130b. Ligature Resistant Lever Handle Lockset  
_Townsteel, Inc.; Anti-Ligature Lever Lockset MRX-L-IP_  
Townsteel, Inc.  
707 N Barranca Ave. Building 6  
Covina, CA 91723  
877-858-0888  

130c. Ligature Resistant Lever Handle Lockset  
_Schlage “L” Series Mortise Lock w/Deco Lever_  
Allegion  
Carmel, IN 46032 US  
317.810.3459  

137a. Push/Pull Locksets  
_Sargent Lock Company; 8200 with Push/Pull Trim (ALP)_  
Sargent Manufacturing Company  
100 Sargent Drive  
P. O. Box 9725  
New Haven, CT 06536-0915  
1-800-727-5477  
[www.sargentlock.com](http://www.sargentlock.com)

137b. Ligature Resistant Lockset  
_Accurate Lock and Hardware; Push/Pull Paddle Trim_  
Accurate Lock and Hardware  
1 Annie Place  
Stamford, CT 06902  
203-348-8865  
[www.accuratelockandhardware.com](http://www.accuratelockandhardware.com)

140. Patient Room Privacy Lockset  
_Stanley Security Solutions; Patient Room Privacy Lockset SPSL-ML-RF-16F-630 & SPSL-ML-LTF-16F-630_  
Stanley Security Solutions  
6161 East 75th Street  
Indianapolis, IN 46250  
800-392-5209  
[www.stanleysecuritysolutions.com](http://www.stanleysecuritysolutions.com)
141. Cylinder Protector

**Stanley Security Solutions; Cylinder Protector**
Stanley Security Solutions
6161 East 75th Street
Indianapolis, IN 46250
800-392-5209
[www.stanleysecuritysolutions.com](http://www.stanleysecuritysolutions.com)

145. Ball Catch

**Ives - #347 Dual Adjustable Ball Catch**
Ives
2720 Tobey Dr.
Indianapolis, IN 46219
877-613-8766

150a. Over door alarm

**Stanley Hardware SEDA Door Alarm**
Best Access Systems
Stanley Security Solutions
6161 East 75th Street
Indianapolis, IN 46250

150b. Over door alarm

**The Door Switch**
11772 Westline Industrial Drive
St. Louis, MO 63146
314-373-7214

150c. Over door alarm

**Door Control Services, Inc; Top Door Alarm**
Door Control Services, Inc.
321 VZ County Road 4500
Ben Wheeler, TX 75754
800-356-2025
160a. Seclusion Room Door Locks
   **Securitech – Seclusion Room Time-Out Lock**
   Securitech
   54-45 44th Street
   Maspeth, NY 11378
   1-800-622-5625
   www.securitech.com

160b. Seclusion Room Door Locks
   **Schlage; LM9000 Multipoint Solution**
   Allegion
   11819 N. Pennsylvania Street
   Carmel, IN 46032 US
   877-671-7011

161. Surface mounted slide bolt
   **Stanley Hardware CD4060 solid brass 6inch long surface bolts**
   Stanley Hardware
   480 Myrtle Street
   New Britain, CT 06053
   1-800-337-4393
   www.stanleyworks.com

170. Life safety window hardware
   **Truth Hardware; Life Safety Window Hardware**
   Truth Hardware
   700 West Bridge St.
   Owatonna, MN 55060
   1-800-866-7884
   www.truth.com

190a. Window Film
   **3M; Scotchshield Ultra or ACE Security Laminates; 200 Series**
   3M Specified Construction Products Department
   3M Center Building 225-4S-08
   St. Paul, MN 55144
   800-480-1704
   [http://solutions.3m.com/wps/portal/3M/en_US/Window_Film/Solutions/?WT.mc_id=www.3m.com/windowfilm](http://solutions.3m.com/wps/portal/3M/en_US/Window_Film/Solutions/?WT.mc_id=www.3m.com/windowfilm)
190b. Window Film

ACE Security Laminates, 200 Series – High-end Safety
Ace/Security Laminates, Inc.
200 Isabella St., Ste. 500
Ottawa, ON, Canada
K1S 1V7
1-888-607-0000
www.smashandgrab.com

200a. Safety Glass

Oldcastle Building Envelope
Oldcastle Building Envelope
5631 Ferguson Drive
Los Angeles, CA 90022
320 3887 6000
www.oldcastlebe.com

200b. Safety Glass

Global Security Glazing – 9/16” Secur-Tem+Poly; #2117
Global Security Glazing
616 Selfield Road
Selma, AL 36703
(800) 633-2513
www.security-glazing.com

201a. Polycarbonate sheet glazing

SABIC brand “Lexan” MR10 Sheet with Margard II UV and Abrasion-Resistant Coating
SABIC Americas
www.sabic.com

201b. Polycarbonate sheet glazing

Sheffield Plastics - Makrolon GP Sheet
Sheffield Plastics
119 Salisbury Road
Sheffield, MA 01257
800-254-1707
www.sheffieldplastics.com
201c. Polycarbonate sheet glazing

*Alro Plastics; Tuffak CM-2 with Abrasion-resistant coating*

Alro Plastics
3100 E. High Street
Jackson, MI 49204
800-877-2576
https://www.myalro.com/

220a. Vision Panels

*Vistamatic, LLC.; Vision Panels, key operation*

Vistamatic, LLC
7351 Wiles Road, Unit 202
Coral Springs, FL 33067
866-466-9525
http://www.vistamaticvisionpanels.com/

220b. Vision Panels

*Unicel Architectural Corp.; mini blinds inside glass panels*

Unicel Architectural
2155 Fernand Lafontaine Blvd.
Longueuil, Quebec
J4G 2J4 Canada
800-668-1580

220c. Vision Panels

*Vistamatic, LLC.; Vision Panels, Between Glass Blinds*

Vistamatic, LLC
5645 Coral Ridge Drive #279
Coral Springs, FL 33076
866-861-9135
http://www.betweenglassblinds.com/
230a. Impact Resistant Gypsum Board

**USG; SHEETROCK® Brand Abuse-Resistant Gypsum Panels**

USG
800-874-4968
[http://www.usg.com/content/usgcom/en.html](http://www.usg.com/content/usgcom/en.html)

230b. Impact-resistant wallboard wallboard

**National Gypsum Hi-Impact Brand Fire Shield Wallboard**
National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211
1-704-365-7300
[www.nationalgypsum.com](http://www.nationalgypsum.com)

231a. Abrasion resistant wallboard

**National Gypsum Hi-Abuse Brand Wallboard**
National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211
1-800-628-4662
[www.nationalgypsum.com](http://www.nationalgypsum.com)

232. Sound absorbing wallboard

**Pabco Gypsum; QuietRock - sound absorbing gypsum board**
Pabco Gypsum
Newark, CA
1-800-797-81592
[www.quietrock.com](http://www.quietrock.com)

240. Wall Base

**Flexco Health Design Wall Base**
Flexco Corporation
1401 East 6th Street
Tuscumbia, AL 35674
800-633-3151

241a. Wall Base

**Roppe Visuelle Wall Base**
Roppe Corporation, USA
1602 North Union Street
Fostoria, OH 44830
800-537-9527
[www.roppe.com](http://www.roppe.com)
241b. Wall Base

*Johnsonite “Millwork” Contoured Wall Base - Mandalay*

Roppe Corporation, USA
1602 North Union Street
Fostoria, OH 44830
800-5379527
[www.roppe.com](http://www.roppe.com)

245a. Sheet vinyl flooring

*Armstrong World Industries, Inc. Commercial Flooring, vinyl, homogeneous*

Armstrong World Industries, Inc.
P.O. Box 3001
Lancaster, PA 17604
1-877-ARMSTRONG
[http://www.armstrong.com](http://www.armstrong.com)

246. Vinyl floor tile

*Armstrong World Industries, Inc. Commercial Flooring, vinyl composition tile*

Armstrong World Industries, Inc.
P.O. Box 3001
Lancaster, PA 17604
1-877-ARMSTRONG
[http://www.armstrong.com](http://www.armstrong.com)

250a. Seamless floors and base

*Dex-O-Tex Cheminert “K” Flooring*

Dex-O-Tex
Division of Crossfield Products Corp.
140 Valley Road
Roselle Park, NJ 07204
908-245-2800
[www.dexotex.com](http://www.dexotex.com)

250b. Seamless floors and base

*Dur-A-Flex Flooring*

Dur-A-Flex, Inc.
95 Goodwin Street
East Hartford, CT 06108
800-253-3539
1-908-245-2800

255. Carpet

**Lees Bello IV Collection**
Lee’s Carpets
3330 W. Friendly Avenue
Greensboro, NC 27410
336-379-3897
[www.leescarpets.com](http://www.leescarpets.com)

270a. Wall Padding

**Marathon Engineering Corporation; Gold Medal Safety Padding**
Marathon Engineering Corporation
5615 2nd Street West
Leigh Acres, FL 33971
239-303-7378

270b. Wall Padding

**Padded Surfaces**
Padded Surfaces
5323 W. Minnesota Street
Indianapolis, IN 46241
888-243-8788

272. Seclusion room wall & floor material

**Lonseal, Inc. LonFloor plain, smooth**
Lonseal, Inc.
928 East 238th Street, Building A
Carson, California  90745
1-800-832-7111
[www.lonseal.com](http://www.lonseal.com)

280. Deco Coat

**Sto-ex, Inc.; DecoCoat**
Sto-ex, Inc.
3932 N Greenbrooke Dr. SE
Kentwood, MI 49512
1-800-782-3162
[www.sto-ex.com](http://www.sto-ex.com)
290. TV Enclosure – suicide resistant

*Behavioral Safety Products; Suicide Resistant Protective TV Enclosure*

Behavioral Safety Products
29A N. Main St., Suite 3
Watkinsville, GA 30677
706-705-1500
www.besafepro.com

300. Room Signs

*2/90 Sign Systems – Flxsigns*

2/90 Sign Systems
5350 Corporate Grove Blvd. SE
Grand Rapids, MI 49512
800.777.4310
www.290signs.com

301. Vinyl Art Work

*Vinyl printed art work*

Kennon Products, Inc.
Sheridan, WY
307-674-6498
http://www.suicideproofing.com/

302a. Ligature Resistant Frames

*Custom Design Frameworks; Solid Surface frames*

Custom Design Frameworks
3998 Fox Hunter Lane
Mechanicsville, VA 23111
804-476-4233
http://www.customdesignframeworks.com/

302b. Ligature Resistant Frames

*Behavioral Safety Products; Ligature Resistant Art Frame #AF550*

Behavioral Safety Products
29A N. Main St., Suite 3
Watkinsville, GA 30677
706-705-1500
www.besafepro.com
320 Synthetic wall material

*Avonite Solid Surface Wall Panels*
Avonite
1945 Highway 304
Belen, NM 87002
1-800-4-AVONITE
[www.avonitesurfaces.com](http://www.avonitesurfaces.com)

332a. Grab Bar

*Cascade Specialty Hardware; SafeBar*
Cascade Specialty Hardware, Inc.
1413 Lincoln Avenue
Vancouver, WA 98660
360-823-3995

332b. Grab Bars

*Weizel Security; SafeBar Grab Bar*
Weizel Security
800-308-3627

332c. Grab Bar

*Northwest Specialty Hardware, Inc.; SecurityBar*
Northwest Specialty Hardware, Inc.
15865 SE 1143th Avenue, Suite C
Clackamas, OR 97015
503-557-1881

335. Grab bars

*Weizel Security; Safe Grab Bar and Self-Draining Grab Bar*
Weizel Security
800-308-3627
337. Grab Bars - Vertical
*Odd Ball Industries; Vertical Grab Bar*
Odd Ball Industries Mfg. Co., Inc.
P.O. Box 376
Greenlawn, NY 11740
1-631-754-0400
[www.oddballindustries.com](http://www.oddballindustries.com)

340. Paper Towel Dispenser
*Weizel Security; Paper Towel Dispenser Model 11-100-10-010*
Weizel Security
800-308-3627

350a. Robe hook – break-away
*Odd Ball Industries; SP6 Robe/Towel Hook*
Odd Ball Industries Mfg. Co., Inc.
P.O. Box 376
Greenlawn, NY 11740
1-631-754-0400
[www.oddballindustries.com](http://www.oddballindustries.com)

350b. Robe hook – break-away
*Bradley Corporation – B983 Vandal Resistant Clothes Hook*
Bradley Corporation
PO. Box 309
Menomonee Falls, WI 53052
1-800-BRADLEY
[www.bradleycorp.com](http://www.bradleycorp.com)

360. Security Mirrors
*American Specialties, Inc.; Roval Inter-Lok stainless steel framed mirror*
American Specialties, Inc.
441 Saw Mill River Road
Yonkers, NY 10701
914-476-9000
361. Mirror Guard

**Odd Ball Industries; Mirror Guard**

Odd Ball Industries Mfg. Co., Inc.
P.O. Box 376
Greenlawn, NY 11740
1-631-754-0400
www.oddballindustries.com

370a. Recessed shelf

**Bradley Corporation – SA47 Recessed Shelf**

Bradley Corporation
PO. Box 309
Menomonee Falls, WI 53052
1-800-BRADLEY
www.bradleycorp.com

370b. Recessed shelf

**Norix Group Inc.; Recessed Stainless Steel Shelf**

Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com

370c. Recessed shelf

**Whitehall Manufacturing; Bestcare Bathroom Accessory Solutions Model Number 1820-FA (front mount)**

Whitehall Manufacturing
P.O. Box 3257
City of Industry, CA 91744
1-800-782-7706
www.whitehallmfg.com

371a. Suicide resistant shelf

**Norix; Suicide Resistant Stainless Steel Shelf**

Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com
371c. Shelf – surface mounted

*Bradley Corporation – SA56 Surface Mounted Shelf*

Bradley Corporation
PO. Box 309
Menomonee Falls, WI 53052
1-800-BRADLEY
www.bradleycorp.com

380. Shower Seat

*Norix; ADA Shower Seat*

Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com

390a. Soap Dish

*Norix Group Inc.; Recessed Soap Dish*

Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com

390b. Soap Dish

*Brey-Krause Manufacturing Co.; Recessed Soap Dish S-2632-SS*

Brey-Krause Manufacturing Co.
1209 W. Lehigh Street
Bethlehem, PA 18018 USA
Phone - 610.867.1401
www.breykrause.com

391a. Soap Dispenser

*Norva Plastics – Soap Dispenser*

Norva Plastics, Inc
3911 Killam Ave.
Norfolk, VA 23508
800-826-0758
www.norvaplastics.com
391b. Liquid soap dispenser

*Saniflow; Soap Dispenser Medigel*
Saniflow Corp.
2655 Le Jeune Road, Suite 810
Coral Gables, FL 33134
1-877-222-9125
http://www.saniflo.com/

391c. Liquid soap dispenser

*Archer Manufacturing; OPS 1-Touch Dispenser*
Archer Manufacturing
Danville, CA
800-796-5545
http://www.vandalproof.org/

393. Paper Soap

*NPW USA; Paper Soap and Shampoo*
NPW USA
1205 Hilltop Parkway
Steamboat Springs, CO 80487
970-879-5242
www.npw-usa.com

400b. Toilet Paper Holder

*Odd Ball Industries; SP-5 Toilet Paper Holder*
Odd Ball Industries Mfg. Co., Inc.
P.O. Box 376
Greenlawn, NY 11740
1-631-754-0400
www.oddballindustries.com

400c. Toilet Paper Holder

*Brey-Krause Manufacturing Co.; Recessed Soap Dish S-2632-SS*
Brey-Krause Manufacturing Co.
1209 W. Lehigh Street
Bethlehem, PA 18018 USA
Phone - 610.867.1401
www.breykrause.com
402. Toilet Paper Holder

*Cascade Specialty Hardware; Safety Toilet Paper Holder, Model C-400*

Cascade Specialty Hardware, Inc.
1413 Lincoln Avenue
Vancouver, WA 98660
360-823-3995
http://www.cascadesh.com/

403. Toilet paper holder

*Norva Plastics – Soap Dispenser*

Norva Plastics, Inc
3911 Killam Ave.
Norfolk, VA 23508
800-826-0758
www.norvaplastics.com

404. Toilet Paper Holder

*Weizel Security; 817-S59 SafeSupport SR Maryland TP Dispenser.*

Weizel Security
800-308-3627
http://www.securinghospitals.com/

410a. Lav Shield

*Truebro, IPS Corporation*

Truebro
202 Industrial Park Lane
Collierville, TN 38017
http://www.truebro.com/plumbing/truebro/lavshield
410b. Lav Shield
*Weizel Security; SR831-S27 SafeSupport SR Undersink Enclosure*
Weizel Security
800-308-3627

10 86 00 –Security Mirrors and Domes
420a. Convex Mirrors
*Norix Group Inc.; Duoarvision, Model QD18*
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
[www.norix.com](http://www.norix.com)

420b. Convex mirrors
*Weizel Security; SR815-S51 SafeSupport Steel Dome Mirror*
Weizel Security
800-308-3627

430a. Aluminum window with integral blind
*Manko Window Systems; 2450 Storefront with hinged sash and integral blind*
Manko Window Systems, Inc.
800 Hayes Drive
Manhattan, KS 66502
800-642-1488
[www.mankowindows.com](http://www.mankowindows.com)

430b. Aluminum window with integral blind
*Wausau Window Systems; 4000i-DT window with integral blind*
Wausau Window and Wall Systems
7800 International Drive
Wausau, WI 54401
877-678-2983
[www.wausauwindow.com](http://www.wausauwindow.com)
430c. Aluminum window with integral blind
   *Unicel Architectural Corp.*; mini blinds inside glass panels
   Unicel Architectural
   2155 Fernand Lafontaine Blvd.
   Longueuil, Quebec
   J4G 2J4 Canada
   800-668-1580

440a. Roller Blinds
   **Webb Shade; Level-Lok**
   Webb Designs, Inc.
   P. O. Box 1405
   El Cajon, CA 92022
   800.262.9322
   [www.webbshade.com](http://www.webbshade.com)

440b. Roller Blinds
   **Draper, Inc.; FlexShades for Healthcare Facilities**
   Draper, Inc.
   411 South Pearl Street
   Spiceland, IN 47385
   800-238-7999
   [www.draperinc.com](http://www.draperinc.com)

460b. Cabinet Pulls
   **Sugatsune America, Inc.; UT-105/S**
   Sugatsune America, Inc.
   18101 Savarona Way
   Carson, CA 90746
   800-562-5267

460d. Cabinet pulls
   **Hafele; Modern Zinc Handles – 104.66.200**
   Hafele
   800-423-3531

465a. Cabinet Locks – Keyless
   **CompX Security Products; eLock Series**
   CompX Security Products
   Mauldin, SC
   864-297-6655
   [www.compx.com](http://www.compx.com)
465b. Cabinet Locks – Keyless

**Hafele; dialock**
Hafele America Co.
3901 Cheyenne Drive
Archdale, NC 27263
800-423-3531

465c. Cabinet Locks – Keyless

**CompX Security Products; 100 Series Cabinet Locks**
CompX Security Products
P. O. Box 200
Mauldin, SC 29662
864-297-6655
[www.compx.com](http://www.compx.com)

470a. Tamper-resistant screws

**Tamperproof Screw Company, Inc.**
Tamperproof Screw Company, Inc.
30 Laurel Street
Hicksville, NY 11801
516-931-1616
[www.tamperproof.com](http://www.tamperproof.com)

470b. Tamper-resistant screws

**Northwest Specialty Hardware, Inc.; Security Pin Torx Screws and Bits**
Northwest Specialty Hardware, Inc.
15865 SE 1143th Avenue, Suite C
Clackamas, OR 97015
503-557-1881

480. Sand ballasted seating

**Norix Group Inc.; Ultra-Max Series**
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
[www.norix.com](http://www.norix.com)
481a. Light weight seating  
**Norix Group Inc.; Integra Series**  
Norix Group, Inc.  
1000 Atlantic Drive  
West Chicago, IL 60185  
1-800-234-4900  
[www.norix.com](http://www.norix.com)

481b. Light weight seating  
**Cortech; RazorBack Chair**  
Cortech Correctional Technologies, Inc.  
7530 Plaza Court  
Willowbrook, IL 60527  
800-571-0770  
[www.cortechusa.com](http://www.cortechusa.com)

481c. Light weight seating  
**Moduform; Stackable chairs**  
Moduform  
172 Industrial Road  
Fitchburg, MA 01420  
800-221-6638  
[www.mycorrectionalfurniture.com](http://www.mycorrectionalfurniture.com)

482a. Upholstered seating  
**Norix Group Inc.; Sierra Series**  
Norix Group, Inc.  
1000 Atlantic Drive  
West Chicago, IL 60185  
1-800-234-4900  
[www.norix.com](http://www.norix.com)

482b. Upholstered Seating  
**Nemschoff; Meridian Chair**  
Nemschoff  
909 North 8th Street  
Sheboygan, WI 53081  
920-459-1205  
482c. Upholstered Seating

*Blockhouse Contract Furniture Company; Endurance Series*

Blockhouse Contract Furniture Company
3285 Farmtrail Road
York, PA 17406
800-346-1126
http://www.blockhouse.com/

482d. Upholstered Seating

*Spec Furniture Inc. – Dignity Series*

Spec Furniture Inc.
888-761-7732
http://www.specfurniture.com/

483c. PVC molded seating

*Norix Group Inc.; Forte’ roto-molded upholstered chairs with wood base or sand ballasted base*

Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com

483d. PVC molded seating

*Norix Group Inc.; Hondo Nuevo*

Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com
490a. Electrically adjustable hospital bed

*Sizewise Behavioral Health Bed*

Sizewise
1600 Genessee, Suite 950
Kansas City, MO 64102
800-814-9389
www.sizewise.net

490b. Electrically adjustable hospital bed

*CHG Spirit Bed with Mental Health Package*

CHG Hospital Beds
153 Towerline Place
London, ON N6E 2T3
866-516-5446
www.chgbeds.com

490c. Electrically adjustable hospital bed

*Stryker; S3 Med/Surg Bed*

Stryker
3800 East Centre Avenue
Portage, MI 49002
269-385-2600

491. Manually adjustable hospital bed

*Stryker; Psych Bed*

Stryker
3800 East Centre Avenue
Portage, MI 49002
269-385-2600

492a. Behavioral Health Mattresses

*Derby Industries; Secure Care Pinnacle Mattresses*

Derby Industries
24350 State Road 23 South
South Bend, IN 46614
866-233-4500
http://www.derbyindustries.com/
492b. Behavioral Health Mattresses

Norix; Comfort Shield Mattresses
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
http://www.norix.com/comfort_shield.asp

492c. Behavioral Health Mattresses

Sizewise Victory Series Mattresses
Sizewise
1600 Genessee, Suite 950
Kansas City, MO 64102
800-814-9389
www.sizewise.net

492d. Behavioral Health Mattresses

American Innovation Products; Behavioral Health Mattress with Bed Bug Protection & BioArmour™
Infection Control Composite Lamination Surface
American Innovation Products
12004 Trinity Road
Trinity, NC 27370
Phone: 814-490-0660
http://www.americaninnovationproducts.com/

493a. Platform Bed

Norix Group Inc.; Roto Cast Series
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com

493b. Patient Room Furniture

Hill-Rom, Harbor Glen Series
Hill-Rom
Batesville, IN 47006
1-812-934-7777
http://www.hill-rom.com/usa/Products/Category/Furniture/Case-Goods/Speciality-Furniture/
493c. Platform bed

CHG Mental Health Platform Bed
CHG Hospital Beds
153 Towerline Place
London, ON N6E 2T3
866-516-5446
www.chgbeds.com

493d. Platform bed

Nemschoff; Platform Bed BHBP/68 and BHHD/68
Nemschoff
909 North 8th Street
Sheboygan, WI 53081
920-459-1205
http://www.nemschoff.com/

493e. Platform bed

Cortech; Endurance Series
Cortech Correctional Technologies, Inc.
7530 Plaza Court
Willowbrook, IL 60527
800-571-0770
http://www.cortechusa.com/shop/uncategorized/endurance-bed/

494a. Platform Bed - lift accessible

Norix; Sleigh Bed
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com

494b. Platform Bed Riser - lift accessible

Norix; Platform Bed Riser
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com
495a. Patient Room Furniture

**Blockhouse Contract Furniture Company; Vista Casegoods**
Blockhouse Contract Furniture
Company
3285 Farmtrail Road
York, PA 17406
800-346-1126
www.blockhouse.com

495b. Patient room furniture

**Norix- Safehouse Series**
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com

495c. Patient room furniture

**This End Up Furniture Company, Inc.; Safe and Tough**
This End Up Furniture Company, Inc.
500 N. 7th Street
Sanford, NC 27331
800-979-4579
www.thisendup.com

495e. Patient Room Furniture

**Norix Group Inc.; Attenda Series**
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
www.norix.com

520a. Fire Sprinklers

**Tyco Fire and Building Products; Raven Fire Sprinkler Head**
Tyco Fire And Building Products
451 N. Cannon Avenue
Lansdale, PA 19446
215-362-0700
520b. Fire Sprinklers

*Weizel Security; SR819-S17 SafeSupport SR Sprinkler*

Weizel Security
800-308-3627

521a. Fire Extinguisher Cabinet

*Whitehall Manufacturing; Facility Safety Solutions*

_Model Number 1704-F_

Whitehall Manufacturing
P.O. Box 3257
City of Industry, CA 91744
1-800-782-7706
[www.whitehallmfg.com](http://www.whitehallmfg.com)

530a. Toilet fixture – floor mounted, back outlet

*American Standard; Neolo 2531.116 Elongated Flush Valve Bowl, Floor Mounted, Back Outlet, Concealed Back Spud Bowls, integral seat*

American Standard
P. O. Box 6820
1 Centennial Way
Piscataway, NJ 08855-6820
1-800-442-1902
[www.americanstandard-us.com/](http://www.americanstandard-us.com/)

530b. Toilet fixture – floor mounted, back outlet

*Eljer; Newark Flush Valve Bowl 111-0527 Elongated Flush Valve Bowl, Floor Mounted, Back Outlet, Concealed Back Spud Bowls, integral seat*

Eljer Plumbingware, Inc.
14801 Quorum Drive
Dallas, TX 75254
1-800-423-5537
531. Toilet fixture, ADA– floor mounted, back outlet

**Crane Plumbing; Sanwalton Elongated Flush Valve Bowl, Floor Mounted, Back Outlet, Concealed Back Spud Bowls, Model 31082 with integral seat or 31083 with holes for movable seat**

Crane Plumbing
41 Cairns Road
Mansfield, OH 44904
1-800-442-1902

[www.craneplumbing.com](http://www.craneplumbing.com)

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533. Solid Surface Toilet Fixture

**Wallgate Products; Solid Surface WCs**

Wallgate Products
44(0)1722-744-594


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534a. Stainless steel toilet

**Willoughby Industries ETW-1490 Series**

Willoughby Industries
2210 West Morris Street
Indianapolis, IN 46221
800-428-4065

[www.willoughby-ind.com](http://www.willoughby-ind.com)

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534b. Toilet Fixture - stainless steel

**Whitehall Manufacturing; Bathroom Solutions Model Number 2142**

Whitehall Manufacturing
P.O. Box 3257
City of Industry, CA 91744
1-800-782-7706

[www.whitehallmfg.com](http://www.whitehallmfg.com)

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536. Bariatric Toilet Fixtures

**Willoughby Healthcare Products; Bariatric Toilet**

Willoughby Healthcare Products
2210 W Morris Street
Indianapolis, IN 46221
800-428-4065

[www.willoughby-ind.com](http://www.willoughby-ind.com)
537. Toilet Waste Line Clog Removal Assistant
   *Willoughby Healthcare Products; Nallyator*
   Willoughby Healthcare Products
   2210 W Morris Street
   Indianapolis, IN 46221
   800-428-4065
   [www.willoughby-ind.com](http://www.willoughby-ind.com)

538. Wall-hung toilet support
   *Big John Products, Inc.; Big John Toilet Support*
   Big John Products, Inc.
   8533 Canoga Avenue, Suite D
   Canoga Park, CA 91304
   1-866-366-0669
   [www.bigjohntoiletseat.com](http://www.bigjohntoiletseat.com)

539a. Toilet – One Piece
   *Whitehall Manufacturing; Bestcare Bathroom Solutions Model Number 1440*
   Whitehall Manufacturing
   P.O. Box 3257
   City of Industry, CA 91744
   1-800-782-7706
   [www.whitehallmfg.com](http://www.whitehallmfg.com)

539b. Toilet – One Piece
   *Bradley Corporation; Comb15500*
   Bradley Corporation
   PO. Box 309
   Menomonee Falls, WI 53052
   1-800-BRADLEY
   [www.bradleycorp.com](http://www.bradleycorp.com)
540a. Lavatories

**Bradley Corporation - Model HSL1 SafeCare Ligature Resistant Single Station Lavatory now available with High Impact Polymer Trap Cover**

Bradley Corporation  
PO. Box 309  
Menomonee Falls, WI 53052  
1-800-BRADLEY  
www.bradleycorp.com

540b. Lavatories

**Behavioral Safety Products; Wall hung lavatory**

Behavioral Safety Products  
29A N. Main St., Suite 3  
Watkinsville, GA 30677  
706-705-1500  
www.besafepro.com

540c. Lavatories

**Intersan Manufacturing Company; Saniwave lavatory with extensions**

Intersan Manufacturing Company  
1748 West Fillmore Street  
Phoenix, AZ 85007  
602-254-3010  
www.intersanus.com

541a. Vanity top lavatory with two button control.

**Norva Plastics - Suicide Prevention Patient Sink Faucet**

Norva Plastics, Inc  
3911 Killam Ave.  
Norfolk, VA 23508  
800-826-0758  
www.norvaplastics.com

541b. Vanity top lavatory with two button control.

**Bradley Corporation - Model WSS-1858 Lavatory System**

Bradley Corporation  
PO. Box 309  
Menomonee Falls, WI 53052  
1-800-BRADLEY  
www.bradleycorp.com
541c. Vanity top lavatory with two button control.

*Willoughby Healthcare Products, Handwash station assembly - AWS*
Willoughby Healthcare Products
2210 W Morris Street
Indianapolis, IN 46221
800-428-4065
www.willoughby-ind.com

550a. Shower head – institutional

*Odd Ball Industries; SP7 Shower Head with Quick Disconnect Hand Held Shower*
Odd Ball Industries Mfg. Co., Inc.
P.O. Box 376
Greenlawn, NY 11740
1-631-242-8482
www.oddballindustries.com

550c. Shower head – institutional

*Behavioral Safety Products; Anti-Ligature Shower Head – SH330*
Behavioral Safety Products
29A N. Main St., Suite 3
Watkinsville, GA 30677
706-705-1500
www.besafepro.com

551a. Shower Valve - ADA

*Armstrong Hot Water Group; brainwave Model DMV2-Individual Shower with optional stainless steel cover.*
Armstrong Hot Water Group
221 Armstrong Blvd
Three Rivers, MI 49093
269-279-3602
www.armstronginternational.com

552a. Shower Valve

*Weizel Security; SafeSupport SR Shower Valve*
Weizel Security
800-308-3627
http://www.securinghospitals.com/
552b. Shower Valve

*Behavioral Safety Products; Ant-Ligature Shower Valve – SV220*

Behavioral Safety Products  
29A N. Main St., Suite 3  
Watkinsville, GA 30677  
706-705-1500  
www.besafepro.com

552c. Shower Valve

*Odd Ball Industries; SP-10 Shower Valve*

Odd Ball Industries Mfg. Co., Inc.  
P.O. Box 376  
Greenlawn, NY 11740  
1-631-754-0400  
www.oddballindustries.com

552d. Shower Valve

*Bradley Corporation – A519 Series Shower Valve*

Bradley Corporation  
PO. Box 309  
Menomonee Falls, WI 53052  
1-800-BRADLEY  
www.bradleycorp.com

553. Shower Valve Control Handle - retrofit

*Weizel Security; SafeSupport SR Retrofit Shower Knob*

Weizel Security  
800-308-3627  
http://www.securinghospitals.com/

550c. Shower head – institutional

*Behavioral Safety Products; Anti-Ligature Shower Head – SH330*

Behavioral Safety Products  
29A N. Main St., Suite 3  
Watkinsville, GA 30677  
706-705-1500  
www.besafepro.com
557a. Shower Diverter Valve
   *Weizel Security; SafeSupport SR Diverter Valve – 834-SN2*
   Weizel Security
   800-308-3627

557b. Shower Diverter Valve
   *Odd Ball Industries; SP-10 Shower Diverter Valve*
   Odd Ball Industries Mfg. Co., Inc.
   P.O. Box 376
   Greenlawn, NY 11740
   1-631-242-8482
   [www.oddballindustries.com](http://www.oddballindustries.com)

560a. Shower Assembly
   *Whitehall Manufacturing; Best Care Shower Solutions Model Number 1741-CSH-SRCH*
   Whitehall Manufacturing
   P.O. Box 3257
   City of Industry, CA 91744
   1-800-782-7706
   [www.whitehallmfg.com](http://www.whitehallmfg.com)

560b. Shower Assembly
   *Weizel Security; SR834-S35 Safe Support SR Shower Panel*
   Weizel Security
   800-308-3627
561a. Shower Assembly – Handicapped Accessible

**Odd Ball Industries; SP7 Shower Head with Quick Disconnect Hand Held Shower**
Odd Ball Industries Mfg. Co., Inc.
P.O. Box 376
Greenlawn, NY 11740
1-631-754-0400
[www.oddballindustries.com](http://www.oddballindustries.com)


**Whitehall Manufacturing; Bestcare Wall Shower Solutions Model Number 1741-FH-CSH-SRCH**
Whitehall Manufacturing
P.O. Box 3257
City of Industry, CA 91744
1-800-782-7706
[www.whitehallmfg.com](http://www.whitehallmfg.com)

564a. Shower trench drain

**Quick Drain USA; Proline Drain with “Dots” cover**
Quick Drain USA
101 Main Street #206
Frisco, CO 80443
866-998-6685

565a. Shower floor basin

**Watermark:**
Watermark
2969 armory Drive, Suite 400
Nashville, TN 37204
615-291-6111
565b. Shower floor basin

Willoughby Healthcare Products, Aquasurf Solid Surface Shower Bases
Willoughby Healthcare Products
2210 W Morris Street
Indianapolis, IN 46221
800-428-4065
www.willoughby-ind.com

566. One Piece Patient Toilet Room Floor

Best Bath Systems; UniFloor
Best Bath Systems
4545 Enterprise Street
Boise, ID 83705
800-727-9970
www.best-bath.com

568. Pre-Built Bathrooms

Eggrock Pre-Built Bathrooms
Eggrock, LLC
265 Foster Street
Littleton, MA 01460
978-952-8800
www.eggrock.com

570a. Lavatory Faucet

Norva Plastics – Suicide Prevention Patient Sink Faucet
Norva Plastics, Inc
3911 Killam Ave.
Norfolk, VA 23508
800-826-0758
www.norvaplastics.com

570b. Lavatory Faucet

Weizel Security; SR832-R12 SR Patient Sink Faucet
Weizel Security
800-308-3627
http://www.securinghospitals.com/
570c. Lavatory Faucet

*Behavioral Safety Products – SF370*
Behavioral Safety Products
29A N. Main St., Suite 3
Watkinsville, GA 30677
706-705-1500
www.besafepro.com

570d. Lavatory Faucet

*Whitehall Manufacturing; Bestcare Basin Solutions Model Number 3374-PPZ*
Whitehall Manufacturing
P.O. Box 3257
City of Industry, CA 91744
1-800-782-7706
www.whitehallmfg.com

570e. Lavatory Faucet

*Willoughby Healthcare Products, Two button bubbler*
Willoughby Healthcare Products
2210 W Morris Street
Indianapolis, IN 46221
800-428-4065
www.willoughby-ind.com

570f. Lavatory Faucet

*Bradley Corporation - 1200 Series CS Faucet*
Bradley Corporation
P. O. Box 309
Menomonee Falls, WI 53052
800 BRADLEY
www.bradleycorp.com

574. Lavatory Countertop Valve

*Odd Ball Industries; SP11 Lavatory Faucet Valve*
Odd Ball Industries Mfg. Co., Inc.
P.O. Box 376
Greenlawn, NY 11740
1-631-754-0400
www.oddballindustries.com
580. Recessed flush valve
   Sloan Valve Company Royal 611 & WB-1-A Easy Access Wall Box
   Sloan Valve Company
   10500 Seymour Avenue
   Franklin Park, IL 60131-1259
   1-800-9-VALVE-9
   http://www.sloanvalve.com

581a. Recessed flush valve
   Sloan Valve Company Regal XL Hydraulic Concealed Flushometer & WB-1-A Easy Access Wall Box
   Sloan Valve Company
   10500 Seymour Avenue
   Franklin Park, IL 60131-1259
   1-800-9-VALVE-9
   www.sloanvalve.com

581b. Recessed flush valve
   Zurn Plumbing Products; 3” Push Button Assembly for Concealed Flush Valves-P6000-NL3
   Zurn Plumbing Products
   5900 Elwin Buchanan Drive
   Sanford, NC 27330-9525
   (919) 775-2255
   www.zurn.com

581c. Recessed flush valve
   Sloan Valve Company Royal Concealed Flushometer for Stainless Steel Water Closets
   Sloan Valve Company
   10500 Seymour Avenue
   Franklin Park, IL 60131-1259
   1-800-9-VALVE-9
   www.sloanvalve.com

585a. Flush valve cover
   Bradley Corporation – Model No. HSC79 SafeCare Ligature Resistant Flush Valve with Cover
   Bradley Corporation
   P. O. Box 309
   Menomonee Falls, WI 53052
   800 BRADLEY
   www.bradleycorp.com
585b. Flush Valve Cover

*Behavioral Safety Products – FV500 (2 piece) & FV600 (1 piece)*

Behavioral Safety Products
29A N. Main St., Suite 3
Watkinsville, GA 30677
706-705-1500
[www.besafepro.com](http://www.besafepro.com)

585c. Flush Valve Cover

*Weizel Security; SR831-S39; SafeSupport SR Flush Vale Enclosure*

Weizel Security
800-308-3627

585d. Flush Valve Cover

*Whitehall Manufacturing; Bestcare Bathroom Solutions Model Number 2802*

Whitehall Manufacturing
P.O. Box 3257
City of Industry, CA 91744
1-800-782-7706
[www.whitehallmfg.com](http://www.whitehallmfg.com)

590a. Medical gas covers

*Hospital Systems, Inc. – PTC Series Security Patient Console*

Hospital Systems, Inc.
750 Garcia Avenue
Pittsburg, CA 94565
925.427.7800

590b. Medical gas covers

*Modular Services Company Security Console 3*

Modular Services Company
500 East Britton Road
Oklahoma City, OK 73114
800-687-0938
[www.headwalls.com](http://www.headwalls.com)
590c. Medical gas covers

*Modular Services Company Security Headwalls w/ 3/8” polycarbonate locked cover bottom hinge*

Modular Services Company
500 East Britton Road
Oklahoma City, OK 73114
800-687-0938
http://www.modularservices.com/products-services/products-type/secure

600a. Air grilles

*Carnes; Stamped, Perforated Diffuser; see catalog D-22*

Carnes Company
448 South Main Street
Verona, WI 53593
608-845-6411
www.carnes.com

600b. Air grilles

*Kees Incorporated - SEG-4P3 Security Grille*

Kees Incorporated
400 S. Industrial Drive
Elkhart Lake, WI 53020
920-876-3391
www.kees.com

602a. Air grilles –

*Anemostat Products Model SSV42, SSV49 and SSV432 – Supply/Return Grille, Heavy Duty with "S" Channel Design*

Anemostat Products
P.O. Box 4938
1220 Watson Center Road
Carson, CA. 90745
1-310-835-7500
www.anemostat.com

602b. Air Grille

*Weizel Security; SR814-R17 SS-Vent High Security Grille*

Weizel Security
800-308-3627
http://www.securinghospitals.com/
604. Air Grille – Max Security
   *Titus; “SD SG” Maximum Security Suicide Deterrent Grille, steel with 3/16” holes*
   Titus
   605 Shiloh Road
   Plano, TX 75074
   972-212-4800
   www.titus-hvac.com

606. Fan Coil Enclosures
   *Arsco; Fan Coil Enclosures / Covers - Security*
   ARSCO Manufacturing Company
   5313 Robert Avenue
   Cincinnati, OH 45248
   800-543-7040
   http://www.arscomfg.com/

607. Thermostat – tamper resistant
   *Kele, Inc.; KTP Series - Stainless Steel Flush-Mount Thermistor or KTP Series*
   Kele, Inc.
   3300 Brother Blvd.
   Bartlett, TN 38133
   888-397-5353
   http://www.kele.com/home.aspx

610a. Hospital grade receptacles
   *Hubbell Incorporated; Hospital Grade GFCI Receptacles*
   Hubbell Incorporated
   Wiring Device-Kellems
   185 Plains Road
   Milford, CT 06461
   800-255-1031
   www.hubbell-wiring.com

610b. Hospital grade receptacles
   *Cooper Industries LTD.; Hospital Grade GFCI Receptacles*
   Cooper Industries LTD.
   600 Travis, STE. 5600
   Houston, TX 77002 1001
   713-209-8400
   www.cooperindustries.com
611. Key operated electric switches

**Hubbell Locking Type Switch #5Z724**
Hubbell, Inc.
584 Derby Milford Road
Orange, CT
www.hubbell.com

612a. Electrical Device Covers - Polycarbonate

**AZ Partsmaster; lexan wall plates**
AZ Partsmaster - Corporate Headquarters
15 N. 57th Drive
Phoenix, AZ 85043
(602) 233-3580
http://www.azpartsmaster.com/

612b. Polycarbonate electrical coverplates

**Mulberry; Unbreakable Endura Molded of Lexan Resin**
Mulberry
2199 Stanley Terrace
Union, NJ 07083
201-688-8850
http://www.mulberrymetal.com/

612c. Polycarbonate electrical coverplates

**Cortech, Correctional Technologies, Inc.; Tiger Security Wall Plates**
Cortech
7501 Quincy
Willowbrook, IL 60527
800-571-0700
www.cortechusa.com

620a. Light fixture

**The L. C. Doane Company; CRN Series with polycarbonate external lens TP door fasteners**
The L.C. Doane Company
P.O. Box 975
Essex, CT. 06426
1-860-767-8295
www.lcdoane.com
620b. Light fixture
Cooper Lighting; Fail Safe SGI with Flat Polycarbonate Lens
Cooper Lighting
1121 Highway 74 South
Peachtree City, GA 30269
770-486-4800
www.cooperindustries.com

620c. Light Fixture
Weizel Security; SR818-R13 Recessed Security Lighting with polycarbonate lens
Weizel Security
800-308-3627
http://www.securinghospitals.com/

620d. Wall Mounted Light Fixture – vandal-resistant
Kenall – Mighty Mac; WCBU Bull Nose Series
Kenall Manufacturing
1020 Lakeside Drive,
Gurnee, IL 60031
847.360.8200
www.kenall.com

620e. Wall Mounted Light Fixture – vandal-resistant
Designplan – RDL/RHL Security downlights
Designplan
79 Trenton Avenue
Frenchtown, NJ 08825
908-996-7710
www.designplan.com

620f. Wall Mounted Light Fixture – vandal-resistant
Luminaire Lighting Corporation – Sonar 12 Vandal Resistant decorative wall fixture
Luminaire Lighting Corporation
7 Olsen Avenue
P. O. Box 2104
Edison, NJ 08818
732-549-0056
www.luminairelighting.com
620g. Wall Mounted Light Fixture – vandal-resistant
*Luminaire Lighting Corporation* – Anyx ARV13 Vandal Resistant round wall/ceiling fixture

Luminaire Lighting Corporation
7 Olsen Avenue
P. O. Box 2104
Edison, NJ 08818
732-549-0056
www.luminairelighting.com

624. Polycarbonate prismatic lens
*The L. C. Doane Company; CRN Series with polycarbonate prismatic lens*

The L.C. Doane Company
P.O. Box 975
Essex, CT. 06426
1-860-767-8295
www.lcdoane.com

630. Downlight Cover
*Recesso Lights;*

Recesso Lights
13501 100th Avenue NE, #524
Kirkland, WA 98034
877-357-6127
http://recessolighting.com/

637. Exterior Lighting
*Kirlin Exterior Vandal Resistant Lighting*

The Kirlin Company
3401 East Jefferson Avenue
Detroit, MI 48207
313-259-6400
http://www.kirlinlighting.com/

639. Night Light
*Chloride Systems; PathMaster LED; PH1SBK*

Chloride Systems
272 West Stag Park Service Road
Burgaw, NC 28425
910-259-1000
http://www.chloridesys.com/chloride/
640a. Exit Signs, Lighted – vandal resistant

**Chloride Systems; Tuff Act Series** Chloride Systems
272 W. Stag Park Service Road
Burgaw, NC 28425
910-259-1000

640b. Exit signs, lighted – vandal-resistant

**Kenall – Mighty Mac; MMEX Series with full length mounting canopy**
Kenall Manufacturing
1020 Lakeside Drive,
Gurnee, IL 60031
847.360.8200
[www.kenall.com](http://www.kenall.com)

642. Exit signs - photoluminescent

**Access Products Inc.; Photoluminescent Exit Sign, Model EX424246-100G**
Access Products Inc.
241 Main Street, Suite 100
Buffalo, NY 14203
888-679-4022

650a. Wireless Duress Alarm

**Pinpoint, Inc.; Instant Alarm 5000**
Pinpoint, Inc.
2100 Southbridge Parkway, Suite 650
Birmingham, AL 35209
205-414-7541

650b. Wireless Duress Alarm

**Versus Technology**
Versus Technology
2600 Miller Creek Road
Traverse City, MI 49686
877-9VERSUS
655a. Stainless Steel Wall Phones  
*Allen Tel Products, Inc.; Model GB306V-14 (with key pad)*  
Allen Tel Products, Inc.  
30 TVS Drive  
Henderson, NV 89014  
702-855-5700  
[www.allentel.com](http://www.allentel.com)

655b. Stainless Steel Wall Phones  
*TWAcomm.com; Ceeco Stainless Steel Wall Phone Model #SW-321-X*  
TWAcomm.com  
Oceanview Promenade  
101 Main Street, 3rd Floor  
Huntington Beach, CA 92648  
1-877-892-2666  
[www.twacomm.com](http://www.twacomm.com)

655c. Stainless Steel Wall Phones  
*G-Tel Enterprises; CS400 Armored Courtesy Phone*  
G-Tel Enterprises  
16840 Clay Road  
Houston, TX 77084  
800-884-4835  

660. Outdoor furniture  
*Norix; Hilltop Outdoor Furniture*  
Norix Group, Inc.  
1000 Atlantic Drive  
West Chicago, IL 60185  
1-800-234-4900  
[www.norix.com](http://www.norix.com)
675a. Security Fencing

*Fence Factory; Miniature Mesh*
Fence Factory
1606 Los Angeles Ave.
Ventura, CA 93004
1-800-613-3623
[www.fencefactory.com](http://www.fencefactory.com)

675b. Security Fencing

*Riverdale Mills, Wire Wall High Security Fencing - Maximum Security*
Riverdale Mills
130 Riverdale Street; PO Box 200
Northbridge, MA 01534
1-800-762-6374
[www.wirewall.com](http://www.wirewall.com)

675c. Security Fencing

*Metalco Fence and Railing Systems – Steel Fence Systems*
Metalco Fence and Railing Systems
586 Territorial Drive
Bolingbrook, IL 60440
800-708-2526

675d. Security Fencing

*Britplas - Safevent Fencing*
Britplas
Unit 18 Kingsland Grange
Woolston
Warrington
WA1 4RW
+44-1925-824317
[www.britplas.com](http://www.britplas.com)
ABOUT THE AUTHORS

James M. Hunt, AIA, NCARB, is a practicing architect and facility management professional with over 40 years of experience. He is a registered Architect, holds a certificate from the National Council of Architectural Registration, and began his career practicing architecture for several major healthcare projects. He then served as director of facilities management for the Menninger Clinic for 20 years. In addition to managing their main campus, he also consulted on behavioral healthcare unit remodeling projects for their Clinical Network program, which involved work in eight states including both coasts and the Midwest. During this time he was a founding member of the Health Care Council of the International Facility Management Association. He held several offices in the council, including chair. He was featured in a cover story of Facility Design and Management magazine and continues to publish articles and speak at major conferences. He is president of Behavioral Health Facility Consulting, LLC. (BHFC), an organization has worked with behavioral health facilities and their designers in 26 states and Canada on improving patient and staff safety. He is also a principal and co-founder of Behavioral Healthcare Architecture Group which has offices in Topeka and New York. This firm specializes in creating healing environments for psychiatric and addictions facilities. He can be reached at 2342 SE Alamar Rd., Topeka, KS 66605 or jim@bhfcllc.com.

David M. Sine, DrBE, CSP, ARM, CPHRM, has had over a 25-year career in safety, risk management, human factors, and organizational consulting. He has been the state Safety Director of two eastern states, the Senior Staff Engineer for The Joint Commission, and a Senior Consultant for the American Hospital Association. Founding partner and one time contributing editor for Briefings on Hospital Safety, co-author of Quality Improvement Techniques for Hospital Safety, one time Vice Chair of the board of Brackenridge Hospital in Austin, Texas, Mr. Sine is certified by the Joint Board of the American Board of Industrial Hygiene and Certified Safety Professionals and as a Certified Professional Healthcare Risk Manager by ASHRM. He has been a healthcare risk management consultant since 1980 and has conducted more than 1,300 Joint Commission compliance assessment surveys. He serves as a member of the NFPA 101 Life Safety Code Subcommittee on Health Care Occupancies, The Joint Commission Committee on Healthcare Safety, and acts as a risk management advisor to the National Association of Psychiatric Health Systems. Mr. Sine served in the corporate offices of the Tenet HealthSystem in Dallas as Director of Risk Assessment and Loss Prevention and Vice President of Occupational Health and Safety. Mr. Sine continues to write and lecture extensively on healthcare policy, governance, quality improvement, and risk management as President of SafetyLogic Systems in Austin, TX. He can be reached at info@safetylogicsystems.com.
ABOUT NAPHS

The National Association of Psychiatric Health Systems (NAPHS) advocates for behavioral health and represents provider systems that are committed to the delivery of responsive, accountable, and clinically effective prevention, treatment, and care for children, adolescents, adults, and older adults with mental and substance use disorders. The NAPHS vision is of a society that values and maximizes the potential of all its citizens by helping them to achieve overall health. To achieve healthy communities, behavioral health will be recognized, respected, and allocated resources with fairness and equity. Through NAPHS representation within accreditation organizations – for example, with representatives on both the Hospital and Behavioral Health Professional and Technical Advisory Committees of The Joint Commission – NAPHS is able to provide input into and advance warning of regulatory and accreditation developments that affect behavioral healthcare providers.

DEFINITIONS / RESOURCES

Americans with Disabilities Act (ADA). The Americans with Disabilities Act gives civil rights protections to individuals with disabilities similar to those provided to individuals on the basis of race, color, sex, national origin, age, and religion. It guarantees equal opportunity for individuals with disabilities in public accommodations, employment, transportation, State and local government services, and telecommunications. See www.ada.gov/.


Health Insurance Portability and Accountability Act of 1996 (HIPAA). The Office for Civil Rights within the U.S. Department of Health and Human Services (HHS) enforces the HIPAA Privacy Rule, which protects the privacy of individually identifiable health information; the HIPAA Security Rule, which sets national standards for the security of electronic protected health information; and the confidentiality provisions of the Patient Safety Rule, which protect identifiable information being used to analyze patient safety events and improve patient safety. See http://www.hhs.gov/ocr/privacy/.

The Joint Commission. See www.jointcommission.org for their standards.


National Institute of Corrections. See http://www.nicic.org/.
List of Manufacturers

Accurate, www.accuratelockandhardware.com
Allen Tel Products, www.allentel.com
Anemostat, http://www.anemostat.com
Armstrong Hot Water Group, http://armstronginternational.com
Arsco, http://www.arsofgmc.com/
Avonite, http://www.avonitesurfaces.com
AZ Partsmaster, http://www.azpartsmaster.com/
Best Bath, www.best-bath.com
Big John, www.bigiohntoiletseat.com
Bradley, http://www.bradleycorp.com
Brey-Krause, www.breykrause.com
Britplas, www.britplas.com
Carnes, www.carnes.com
Ceco, http://www.cecodoor.com
CHG, www.chgbeds.com
CompX, www.compx.com
Cooper, www.cooperindustries.com
Cortech, www.cortechusa.com
Crane, http://www.craneplumbing.com
Curries, http://www.curries.com
Designplan, www.designplan.com
Dex-O-Tex, http://www.dexotex.com
DHSI, http://www.dhsi-seal.com
Door Switch, http://thedoorswitch.com/
Draper, Inc., www.draperinc.com
Dynalock Corp, http://www.dynalock.com
Eggrock, www.eggrock.com
Fence Factory, http://www.fencefactory.com
Flxsigns, www.290signs.com
Global, www.security-glazing.com
G-Tel, http://www.payphone.com/
Hill-Rom Harbor Glen, www.hill-rom.com
Hospital Systems Inc., www.HospitalSystems.com
Hubbell, www.hubbell-wiring.com
Intersan, www.intersanus.com
Johnsonite, http://www.roppe.com
Kane Mfg., http://www.kanescreens.com/
Kees, www.kees.com
Kenall, www.kenall.com
Kirlin, www.kirlinlighting.com
LCN, http://us.allegion.com/brands/lcn/Pages/default.aspx
Lees Carpet, http://www.leescarpets.com
Lonseal, http://lonseal.com
Luminaire, www.luminairelighting.com
Manko Windows, www.mankowindows.com
McMaster-Carr, http://www.mcmaster.com
Moduform, www.mycorrectionalfurniture.com
Modular Services, http://headwalls.com
Mulberry, http://www.mulberymetal.com/
Norix, http://www.norix.com
Norva Plastics, www.norvaplastics.com
NPW USA, www.npw-usa.com
Odd Ball, http://www.oddballindustries.com
Oldcastle, www.oldcastlebe.com
Pabco Gypsum, www.quietrock.com
Pecora, www.pecora.com
Riverdale Mills, [http://www.wirewall.com](http://www.wirewall.com)
Rockwood, [www.rockwoodmfg.com](http://www.rockwoodmfg.com)
Roppe, [http://www.roppe.com](http://www.roppe.com)
Sabic, [www.sabic.com](http://www.sabic.com)
Sani-liner, [http://www.wisconsinconverting.com](http://www.wisconsinconverting.com)
Sargent Lock, [www.sargentlock.com](http://www.sargentlock.com)
Scotchshield, [http://solutions.3m.com/wps/portal/3M/en_US/Window_Film/Solutions/?WT.mc_id=www.3m.com/windowfilm](http://solutions.3m.com/wps/portal/3M/en_US/Window_Film/Solutions/?WT.mc_id=www.3m.com/windowfilm)
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Sheffield, [www.sheffieldplastics.com](http://www.sheffieldplastics.com)
Sizewise, [http://www.sizewise.net](http://www.sizewise.net)
Sloan, [http://www.sloanvalve.com](http://www.sloanvalve.com)
Stanley Hdw., [www.stanleyworks.com](http://www.stanleyworks.com)
Sto-ex, [http://www.sto-ex.com](http://www.sto-ex.com)
Surebond, [www.surebond.com](http://www.surebond.com)
Tamperproof Screws, [http://www.tamperproof.com](http://www.tamperproof.com)
This End Up, [www.thisendup.com](http://www.thisendup.com)
3M, [http://solutions.3m.com/wps/portal/3M/en_US/Window_Film/Solutions/?WT.mc_id=www.3m.com/windowfilm](http://solutions.3m.com/wps/portal/3M/en_US/Window_Film/Solutions/?WT.mc_id=www.3m.com/windowfilm)
Titus, [www.titus-hvac.com](http://www.titus-hvac.com)
Total Door, [www.total-door.com](http://www.total-door.com)
Total Lock and Security, [www.ttf.com](http://www.ttf.com)
Truth Hdw., [http://www.truth.com](http://www.truth.com)
TWA Comm, [http://www.twacomm.com](http://www.twacomm.com)
2/90 Sign Systems, [www.290signs.com](http://www.290signs.com)
USG Sheetrock, [http://www.usg.com/content/usgcom/en.html](http://www.usg.com/content/usgcom/en.html)
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