Resources for Selecting Architectural Details, Surfaces, and Furnishings for Health Care Facilities

2010 Health Guidelines Revision Committee Specialty Subcommittee on Surfaces

In the 2010 Facility Guidelines Institute (FGI) Guidelines for Design and Construction of Health Care Facilities, the requirements for architectural details, surfaces, and furnishings can be found in the same location in every chapter to make them easier to find. This organization is based on the criteria for selecting health care surfaces established in the 2006 edition of the Guidelines in appendix section A1.5-2.2.1.5. The 2010 edition has expanded on these criteria, further defining performance characteristics, including resources for appropriate selection and application to assist in preparing specifications. This information is provided as recommended supplemental material to the 2010 Guidelines; it is not all inclusive but rather a starting point for creation of a collective resource of relevant information. This paper will be periodically updated using suggestions from readers; it can be downloaded from the FGI website at http://www.fgiguidelines.org/interim_pubs.html.

In the 2010 FGI Guidelines, preferred performance characteristics of ideal products are listed in appendix section A1.2-3.2.1.5 in Chapter 1.2 (Planning, Design, Construction, and Commissioning). The content of this resource list is organized using these characteristics.

1. Resources that address these preferred characteristics:
   - Easy to maintain/repair and clean
   - Slip-resistant (appropriate coefficient of friction)
   - Easy to install, demolish, and replace
   - Has compatible substrate and materials for surface assemblies
   - Resilient, impact-resistant

(1) General information
Americans with Disabilities Act (ADA): www.ada.gov

(2) Flooring
American Association of Textile Chemists and Colorists (www.aatcc.org)
   AATCC Evaluation Procedure 1: Gray Scale for Color Change
   AATCC Evaluation Procedure 2: Gray Scale for Staining
   AATCC Test Method 16: Colorfastness to Light Option 3 (Xenon Arc Continuous Light) for 40 AATCC fading units
Carpet and Rug Institute (CRI): www.carpet-rug.org
   ASTM D5684: Standard Terminology Relating to Pile Floor Coverings
   ASTM D6540: Standard Test Method for Accelerated Soiling of Pile Yarn Floor Covering
Resilient Floor Covering Institute (RFCI): www.rfci.com
   ASTM F693: Standard Practice for Sealing Seams of Resilient Sheet Flooring Products
   ASTM F710: Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
ASTM F1482: Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring
ASTM F1516: Standard Practice for Sealing Seams of Resilient Flooring Products by the Heat Weld Method (When Recommended)
ASTM F1869: Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
ASTM F2170: Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in Situ Probes
ASTM F2419: Standard Practice for Installation of Thick Poured Gypsum Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring
ASTM F2471: Standard Practice for Installation of Thick Poured Lightweight Cellular Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring

(3) Walls, wall bases, and wall protection
   Chemical Fabrics and Film Association (CFFA): www.chemicalfabricsandfilm.com
   Wallcoverings Association (WA): www.wallcoverings.org

(4) Ceilings

(5) Lighting
   Illuminating Engineering Society of North America (IESNA) standards: www.iesna.org
   IESNA RP-29: Lighting for Hospitals and Health Care Facilities
   IESNA RP-28: Lighting and the Visual Environment for Senior Living

(6) Doors and hardware

(7) Grab bars

(8) Handrails

(9) Furnishings (includes upholstery)
   American Association of Textile Chemists and Colorists (AATCC): www.aatcc.org
   American Fiber Manufacturers Association (AFMA): www.fibersource.com

(10) Casework, millwork, and built-ins
   International Cast Polymer Alliance (ICPA): www.icpa-hq.org
   International Solid Surfaces Fabricators Association (ISSFA): www.isfanow.org
   NEMA (The Association of Electrical and Medical Imaging Equipment Manufacturers):
   www.nema.org
   ANSI/NEMA LD 3: High-Pressure Decorative Laminates

(11) Furniture
   Business and Institutional Furniture Manufacturer's Association (BIFMA): www.bifma.com

(12) Window treatments

(13) Signage and wayfinding
2. Resources that address these preferred characteristics:

- Does not support microbial growth
- Nonporous and smooth
- Seamless
- Made of non-toxic/non-allergenic materials

(1) General
   Centers for Disease Control and Prevention (CDC): www.cdc.gov

(2) Flooring
   Carpet and Rug Institute (CRI): www.carpet-rug.org
   Resilient Floor Covering Institute (RFCI): www.rfci.com

(3) Walls, wall bases, and wall protection
   Association of the Wall and Ceiling Industry (FWCI): www.awci.org
   *Mold: Cause, Effect and Response* (Foundation Research Series)
   Chemical Fabrics and Film Association (CFFA): www.chemicalfabricsandfilm.com
   Wallcovering Association (WA): www.wallcoverings.org

(4) Ceilings

(5) Lighting
   Illuminating Engineers Society of North America (IESNA): www.IESNA.org

(6) Doors and hardware
   AAMA Certification Program
   www.aamanet.org/pubstore/A440H-08EN_UP_2.pdf
   Builders Hardware Manufacturers Association (BHMA): www.buildershardware.com
   ANSI/BHMA A156 standards for doors and hardware (A156.1 through A156.31).
   Steel Door Institute (SDI): www.steeldoor.org
   ANSI/SDI-100: *Recommended Specifications for Standard Steel Doors and Frames*.
   www.steeldoor.org/res/A250_8.pdf
   Window and Door Manufacturers Association (WDMA): www.wdma.com

(7) Grab bars

(8) Handrails

(9) Furnishings (includes upholstery)

(10) Casework, millwork, and built-ins
   ASTM International: www.astm.org
   ASTM D6329: *Standard Guide for Developing Methodology for Evaluating the Ability of Indoor Materials to Support Microbial Growth Using Static Environmental Chambers* (as base standard)

continued
ASTM G21: *Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi*

NSF International: [www.nsf.org](http://www.nsf.org)


(11) Furniture

(12) Window treatments

(13) Signage and wayfinding

### 3. Resources that address this preferred characteristic:

- Has acoustic properties (e.g., sound absorption), where applicable

(1) General

  Acoustics Research Council (ARC)


(2) Flooring
(3) Walls, wall bases, and wall protection
(4) Ceilings
(5) Doors
(6) Furnishings (includes upholstery)
(7) Casework, millwork, and built-ins
(8) Furniture
(9) Window treatments

### 4. Resources that address these preferred characteristics:

- Durable
- Sustainable
- Low-VOC
- Cost-effective (initial and life-cycle cost-effectiveness)

(1) General

  ASTM International: [www.astm.org](http://www.astm.org)

  ASTM E917-05e1: *Standard Practice for Measuring Life-Cycle Costs of Buildings and Building Systems*

  ASTM E1991: *Standard Guide for Environmental Life Cycle Assessment (LCA) of Building Materials/Products*

  ASTM E2129: *Standard Practice for Data Collection for Sustainability Assessment of Building Products*

  ASTM E2432: *Standard Guide for General Principles of Sustainability Relative to Buildings*

  The Athena Institute: [www.athenasmi.org](http://www.athenasmi.org)

  Athena® EcoCalculator
   Section 01350: Special Environmental Requirements Specification.
   www.ciwmb.ca.gov/GreenBuilding/Specs/Section01350
Green Building Initiative™ (GBI): www.thegbi.org
   Green Globes® Building Rating/Certification
   Proposed GBI 01: Green Building Assessment Protocol for Commercial Buildings
U.S. Green Building Council (USGBC): www.usgbc.org
   LEED® green building certification program

(2) Flooring
   Carpet and Rug Institute (CRI): www.carpet-rug.org
   CRI Green Label
   CRI Green Label Plus
   NSF International: www.nsf.org
   ANSI/NSF 140: Sustainable Carpet Assessment
   NSF 332 Draft Standard: Sustainability Assessment for Resilient Floor Coverings
   Resilient Floor Covering Institute (RFCI): www.rfci.com
   FloorScore®

(3) Walls, wall bases, and wall protection
   Chemical Fabrics and Film Association (CFFA): www.chemicalfabricsandfilm.com
   Wallcoverings Association (WA): www.wallcoverings.org
   NSF International: www.nsf.org
   NSF 342 Guidance Document Draft: Sustainability Assessment for Wallcovering Products

(4) Ceilings

(5) Lighting
   U.S. Environmental Protection Agency
   Energy Star: www.energystar.gov

(6) Doors and hardware
   AAMA Certification Label
   Builders Hardware Manufacturers Association (BHMA): www.buildershardware.com
   ANSI/BHMA A156 standards for doors and hardware (A156.1 through A156.31).
   Steel Door Institute (SDI): www.steeldoor.org
   ANSI/SDI-100: Recommended Specifications for Standard Steel Doors and Frames.
   www.steeldoor.org/res/A250_8.pdf
   Window and Door Manufacturers Association (WDMA): www.wdma.com
   AAMA/WDMA/CSA 101/IS.2/A440: North American Fenestration
   Standard/Specification for windows, doors, and skylights.

(7) Grab bars

(8) Handrails
(9) Furnishings (includes upholstery)
   American Association of Textile Chemists and Colorists (AATCC): www.aatcc.org
   AATCC Test Method 16: Colorfastness to Light. Method 16A
   NSF International: www.nsf.org
   NSF 336 Draft Standard: Commercial Furnishings Fabric Sustainability Assessment
   Wyzenbeek Test (Double Rubs)

(10) Casework, millwork, and built-ins
   ASTM International: www.astm.org
   ASTM D5116: Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products
   ASTM D6670: Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/Products
   International Cast Polymer Alliance (ICPA): www.icpa-hq.org
   International Surface Fabricators Association: www.isfanow.org
   NEMA (The Association of Electrical and Medical Imaging Equipment Manufacturers):
   www.nema.org
   ANSI/NEMA LD 3: High-Pressure Decorative Laminates

(11) Furniture
   Business and Institutional Furniture Manufacturer's Association (BIFMA International):
   www.bifma.org
   ANSI/BIFMA E3-2008: Business and Institutional Furniture Sustainability Assessment Standard

(12) Window treatments
   Window Coverings Association of America (WCAA): www.wcaa.org

(13) Signage and wayfinding

5. Resources that address these characteristics:
   - Inflammable – Class I fire rating
   - Low smoke toxicity

(1) General
   National Fire Protection Association (NFPA): www.nfpa.org
   NFPA 701: Standard Methods of Fire Tests for Flame Propagation of Textiles and Films

(2) Flooring
   Carpet and Rug Institute (CRI): www.carpet-rug.org
   Resilient Floor Covering Institute (RFCI): www.rfci.com

(3) Walls, wall bases, and wall protection
   ASTM International: www.astm.org
   Chemical Fabrics and Film Association (CFFA): www.chemicalfabricsandfilm.com

continued
Wallcoverings Association (WA): www.wallcoverings.org
NYC and NYS toxicity testing

(4) Ceilings
(5) Lighting
(6) Doors and hardware
(7) Grab bars
(8) Handrails

(9) Furnishings (includes upholstery)
ASTM International: www.astm.org
Boston Fire Department, Fire Prevention Division. www.cityofboston.gov/fire
California Department of Consumer Affairs, Bureau of Home Furnishings and Thermal Insulation: www.bhfti.ca.gov
National Fire Protection Association (NFPA): www.nfpa.org
   NFPA 710: Standard Methods of Fire Tests for Flame Propagation of Textiles and Films (large and small scale)
   NFPA/UFAC 260: Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture

(10) Casework, millwork, and built-ins
ASTM International: www.astm.org

(11) Furniture
(12) Window treatments
(13) Signage and wayfinding

6. Resources that address this preferred characteristic:
   - Controls reflectivity/glare

(1) General
(2) Flooring
(3) Walls
(4) Ceilings

(5) Lighting
   Illuminating Engineers Society of North America (IESNA): www.iesna.org
   IESNA RP-29: Lighting for Hospitals and Health Care Facilities
   IESNA RP-28: Lighting and the Visual Environment for Senior Living
(6) Casework, millwork, and built-ins
(7) Window treatments
(8) Signage and wayfinding

7. Resources that address this preferred characteristic:
   ● Has options for color, pattern, and texture

(1) General
(2) Flooring
(3) Walls, wall bases, and wall protection
(4) Ceilings
(5) Lighting
(6) Doors and hardware
(7) Grab bars
(8) Handrails
(9) Furnishings (includes upholstery)
(10) Casework, millwork, and built-ins
(11) Furniture
(12) Window treatments
(13) Signage and wayfinding

On behalf of the 2010 Health Guidelines Revision Committee Specialty Subcommittee on Surfaces:

Chair
Andrea V. Hyde, ASID, AAHID, MDCID
410-456-4907
ahyde@hydeinc.com

2010 HGRC and SS on Surfaces member
Jane M. Rohde, AIA, FIIDA, ACHA, AAHID, LEED AP
410-461-7763
jane@jsrassociates.net

For information on purchasing the 2010 FGI Guidelines for Design and Construction of Health Care Facilities, visit the Facility Guidelines Institute website at www.fgiguidelines.org.