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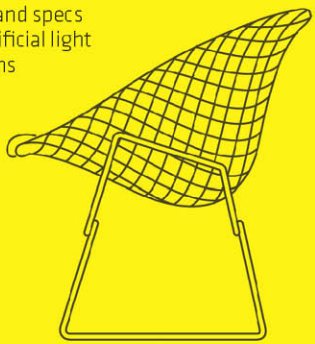
Interior Design

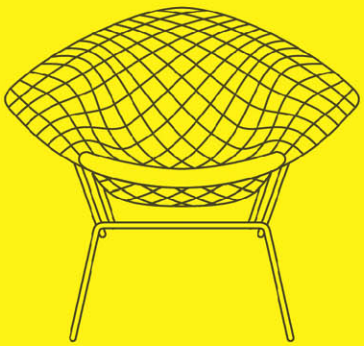
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Reference + Specification Book

Everything Interior Designers Need to Know Every Day

- Project management tools
- Sequencing spaces
- Design software
- Digital presentations
- Sustainability guidelines
- Standard dimensions tables
- Codes and accessibility
- Contrast and color rules
- Paint types
- Wall coverings
- Flooring types and specs
- Natural and artificial light
- Invisible systems
- Drawing basics





Chris Grimley +
Mimi Love



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INTRODUCTION

This book was conceived as a resource for a wide readership, whether in answering specific questions for established interior designers or providing an overview of the design process for the layperson. It is compact and easy to slip into a shoulder bag, but precisely because of its handy size, it cannot address every issue related to interior design. Instead, we believe that by distilling the essential principles of interior design and clarifying steps and goals of the design process itself, higher quality design will reach the broadest possible audience.

Guides to interior design generally fall into two categories. The first type is the beautiful coffee table book by style mavens. These books are full of personality and style, but lack an overall structure that describes the fundamental principles for making design decisions. The second type is the design manual. These volumes are full of useful information, but eschew a specific attitude about design strategies. Our goal is to create the classic textbook for interior design, yet with more inspiring design theory and better visual taste. We hope this book presents a fresher approach that represents the cultural preoccupations of a younger generation of designers.

The book has been organized thematically into six sections:

Section 1, “Fundamentals,” provides a step-by-step examination of an interior project. It describes the scope of professional services, the project schedule, and drawing and presentation techniques.

Section 2, “Space,” offers an overview of the design of rooms and larger sequences of spaces, while addressing functional and life-safety issues.

Section 3, “Surface,” details specific tactics for designing with color, materials, textures, and patterns. It also considers performance and maintenance issues.

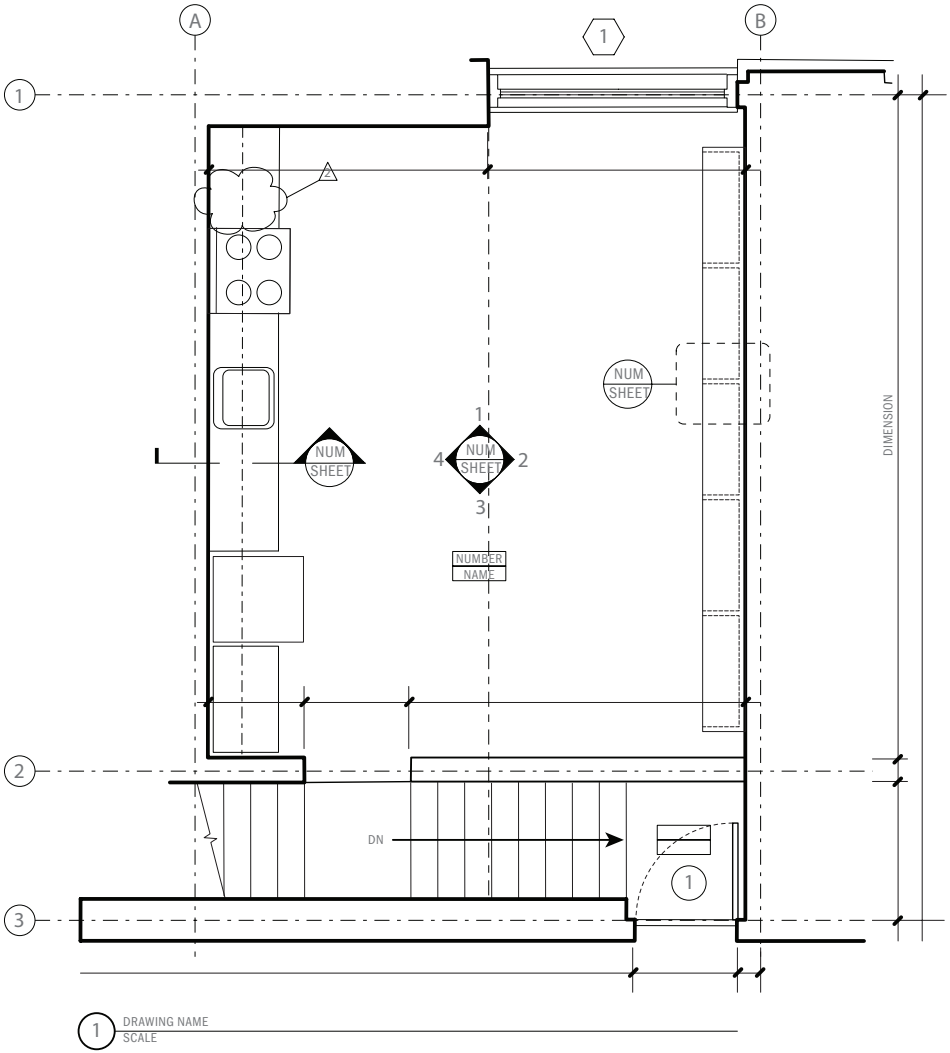
Section 4, “Environments,” looks at aspects of interior design that help to create a specific mood or character, such as natural and artificial lighting, and the invisible systems that impact the comforts of a space.

Section 5, “Elements,” identifies useful details for a range of interior applications. It also includes a chart of canonical twentieth-century furniture—pieces every interior designer should know. In addition, it outlines ideas for the display of artwork, collectibles, and accessories.

Section 6, “Resources,” provides a wealth of useful information, from a summary of sustainable design strategies to lists of recommended books, blogs, and websites.

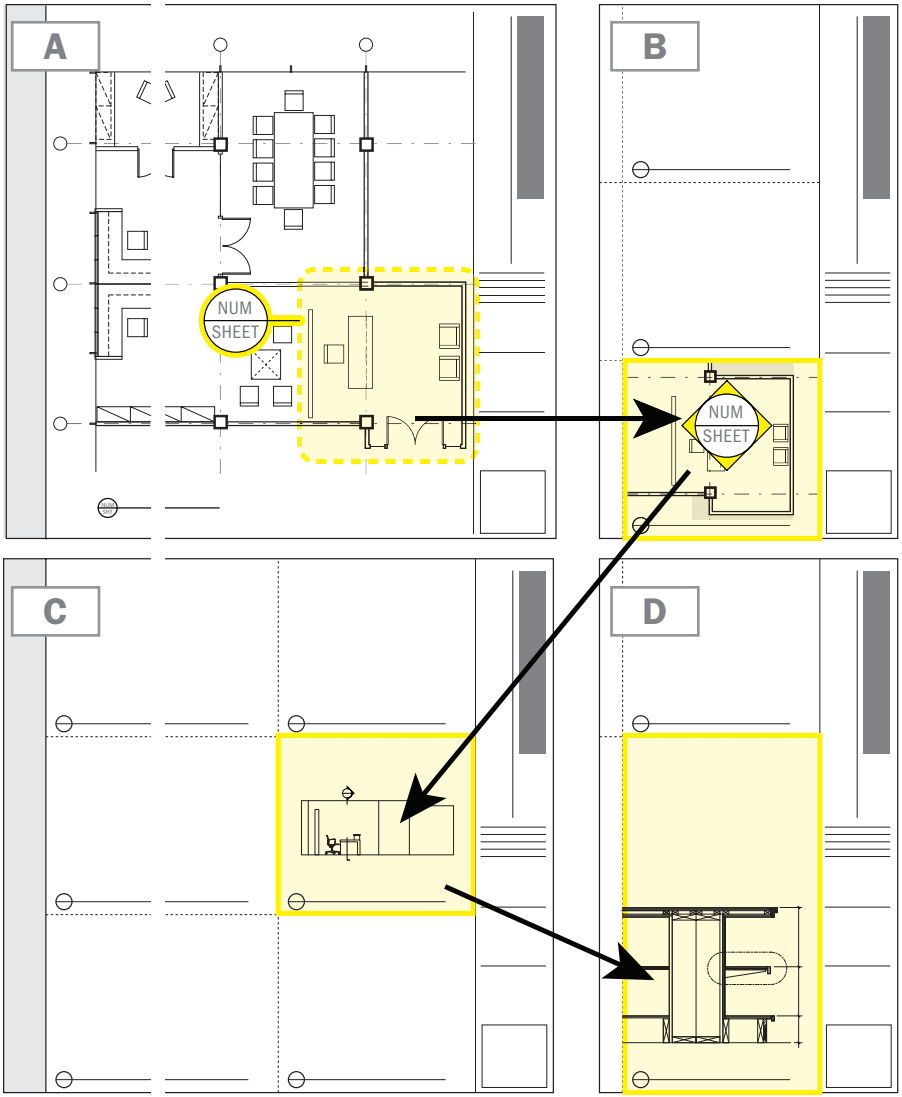
Finally, we have interspersed throughout the book interviews with our favorite practitioners to demonstrate how the topics covered in each section can be creatively interpreted in practice.

Symbols on a plan drawing are keyed to other drawings in the set, including reflected ceiling plans, elevations, sections, and details. Elements needed to implement a design are thus easily read from drawing to drawing, and revisions are readily coordinated. Dimensions are indicated in strings around the plan, or in some cases, within the plan itself. Legibility of text and numbers is crucial to reading a plan.



Chasing the Details

A typical sequence for following the links in a drawing set is illustrated below. A plan drawing (A) contains information regarding, among other things, an enlarged plan. Navigating to the cross-referenced sheet (B) indicates a further link to room elevations (C), which are marked with sectional information found on yet another sheet (D). As with the multidrawing sheet, the gridded coordinate system allows for more details to be easily added as necessary.



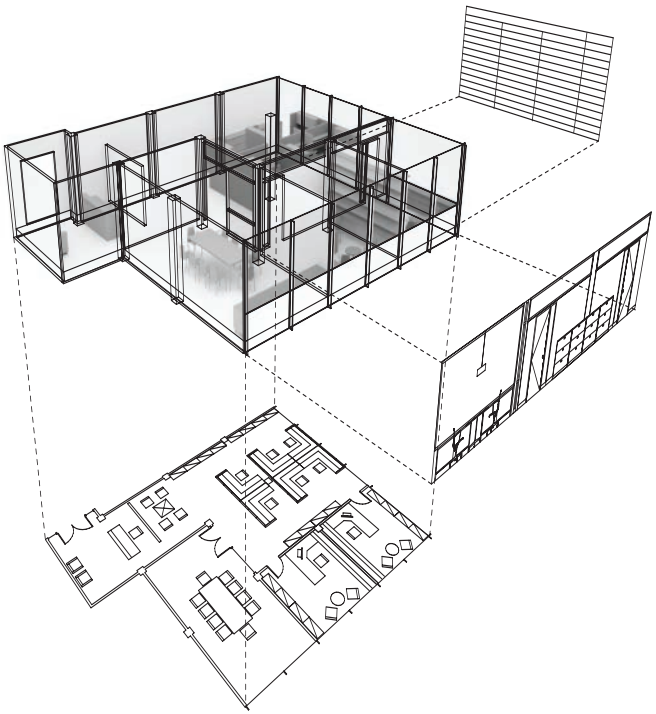
Building Information Modelers

The limits of solid and surface modelers are similar to those of two-dimensional technologies in that the information (except for some parametric data control in NURBS objects) cannot represent the exact nature and process for construction. By contrast, building information modelers, or BIMs, are now an established technology in the architecture, interior design, and construction management worlds that enable the designer—or team of designers—to create a complete, functional, and representative model of a space as it is being designed.

In a BIM system, all of the elements of a building are modeled using objects specific to the construction industry (walls, floors, finishes, and furniture) that have parameters (materiality, width, height, mass, or cost) that can be closely monitored as the design develops. The result is a precise simulation of the design in terms of aesthetics, cost, and building performance. All typical two-dimensional drawings, schedules, and details are derived from an active three-dimensional model, and any changes made to the base model are instantly reflected in the documentation required for the project. This technology allows for more time spent designing and less time documenting, maximizing the opportunity to explore the design in full.

File Interchange

All drafting applications write data to their own file types, yet it is essential to be able to share the information created with consultants and collaborators on the project. The most common formats for this are DWG and DXF files. Although these formats are proprietary to Autodesk, most, if not all, of the applications used in the industry are able to export to them with varying levels of success.



PERSPECTIVE RENDERING TECHNIQUES

Hidden Line and Shadows

Like perspective drawings done by hand, hidden line images essentialize the space through the use of lines. Shadows and textures in a hidden line image can deepen an image, give clarity to certain elements of the design, and express more fully the designer's intent. As with plans and sections, shadow position and intensity should be chosen carefully. These drawings can be produced within a three-dimensional application, but are more easily assembled as collages within a two-dimensional raster image program.

Line and Color

Adding color to a line drawing emphasizes aspects of the interior environment in a clear and minimal way.



Line, Color, and Shadow

Adding shadows to a line drawing gives greater depth and drama to an image.



Light

Key to any understanding of space is light. Computers can simulate light within interior space through a variety of algorithms, including surface renderings and ray trace renderings. The former do not adequately represent light or materials, however, and the accuracy of the latter is not as rich as other solutions. Recently, two alternative algorithms have been introduced: global illumination and physically accurate solutions. Global illumination calculates both direct and indirect light that enters a space. Color from reflected surfaces is bounced into the scene. Physically accurate rendering software simulates the precise physics of light in an environment; it allows for careful evaluation of both natural light entering a space and artificial light within a space. These calculations are computationally intensive and can take many hours to complete. Designers should familiarize themselves with the complex factors that influence the efficiency of any solution.



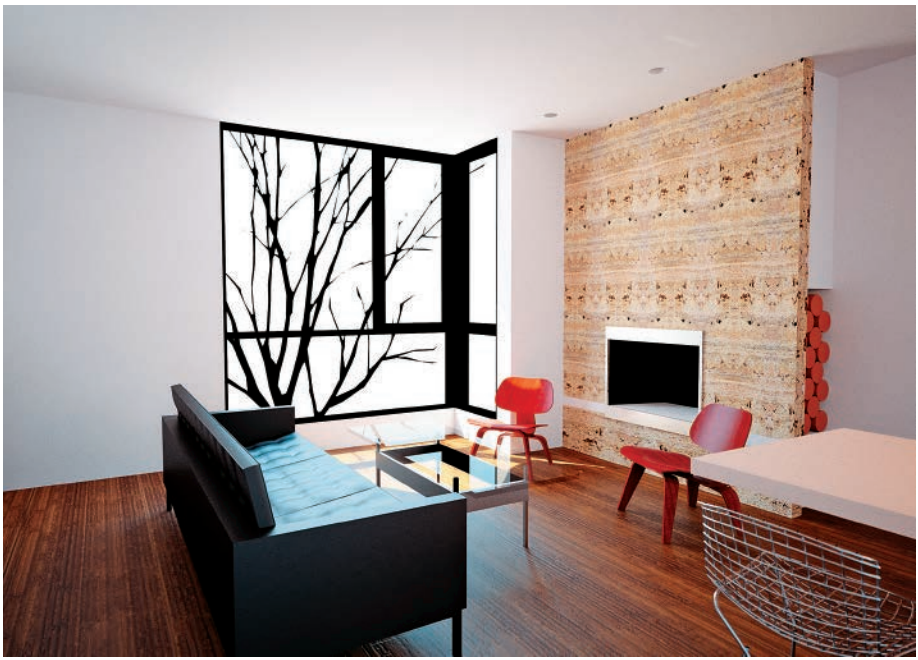
Surface Rendering

Surface renderings are simple representations of the space.



Ray Trace Rendering

Ray trace renderings add reflections and traced shadows to a scene.



Accurate Lighting Solutions

Computers are now powerful enough to use complex algorithms, such as global illumination and physically accurate solutions, to represent how light interacts with color and space.

Three-Dimensional Rendering Software

Three-dimensional renderings are typically generated through whatever specific program the model was created in. Recently, a number of alternative rendering systems have emerged that offer a wide range of representational opportunities. Realistic materials, complex lighting techniques, atmospheric effects, and the ability to render soft, pliable surfaces are now available to the designer at all levels of the rendering spectrum. In addition, renderers have begun to harness the power of a computer's GPU for quicker and in some cases, real-time imaging. These systems allow for a variety of modeling programs to be used to create form, while the rendering takes place either within that platform or as a stand-alone application.

PLUG-IN SYSTEMS

Application	Material System	Complex Lighting	Physically Accurate	Operating System	Price
VRay	×	×	×	OS X, Windows	**
Corona	×	×	×	OS X, Windows	**
Maxwell	×	×	×	OS X, Windows	**
Arnold	×	×	×	OS X, Windows	**
Thea	×	×	×	OS X, Windows	**
Octane	×	×	×	OS X, Windows	**
Unity	×	×	×	OS X, Windows	**

INTEGRATED SYSTEMS

Application	Material System	Complex Lighting	Physically Accurate	Operating System	Price
Cinema 4D	×	×	×	OS X, Windows	****
Revit		×	×	Windows	****
Form•Z	×	×		OS X, Windows	***

(REFER TO THE RESOURCES CHAPTER FOR FURTHER INFORMATION AND LINKS TO SOFTWARE VENDORS.)

PERSPECTIVES ON FUNDAMENTALS: DEBORAH BERKE

Deborah Berke, could you describe yourself and your practice?

I've been practicing architecture for more than twenty years. The practice has grown from being a desk in the middle of my studio apartment to a thirty-five-person office that provides services that include master planning, urban design, traditional architecture as it's understood, interior design, and actually even decorating; we offer a full range of services. Some of our clients elect to take only one and others elect to take advantage of more.

Who were your mentors in teaching you about design?

Judith Wolin, who was my teacher at the Rhode Island School of Design, was my literal, most direct mentor. I was at RISD in the 1970s—it was very much an artsy environment. What Judy made appreciable to me was the idea that your work was good if you brought an intelligence to it and if you brought to it the idea of revisiting and editing and reconsidering; in other words, a rigorous form of self-critique.

I then taught at the Institute for Architecture and Urban Studies. Spending five years in the company of Peter Eisenman, Anthony Vidler, Kenneth Frampton, Mario Gandelsonas and Julia Bloomfield—in an environment that valued intelligence and inquiry—was the next chapter of mentoring. After that, I took a radical departure from that kind of straightforward education and it became about taking what I had learned in that environment and applying it to the things that I have always intuitively cared about, which is the found and not the consciously created. Now, I would rather wander the back part of the city to discover the decrepit oddities. I'm taking the word "mentoring" and morphing it into inspiration.

At what point in your life did you feel confident about starting your own company?

When I got out of school there wasn't any work for architects, so my first job was in the graphic design department of an enormous multinational engineering firm that had its headquarters in New York. This job was not intellectually challenging, and I started hanging out at the IAUS (Institute for Architecture and Urban Studies), taking courses. Eventually, I got a job as administrator of the educational programs under Mario Gandelsonas and then became a teacher there. Augmenting that salary, I taught in two elementary schools; the NEA in those days put artists and architects into public schools—they paid $100 a day, which was a lofty sum. The courage to open my own practice came less from a sense that I finally have a job and I can open the doors, than I finally have enough other kinds of jobs. I can print up some business cards, put a straightedge on my coffee table, and say that I'm in practice. That's how it worked for me.



The pure geometry of a square room can demand a symmetrical arrangement of furnishings.



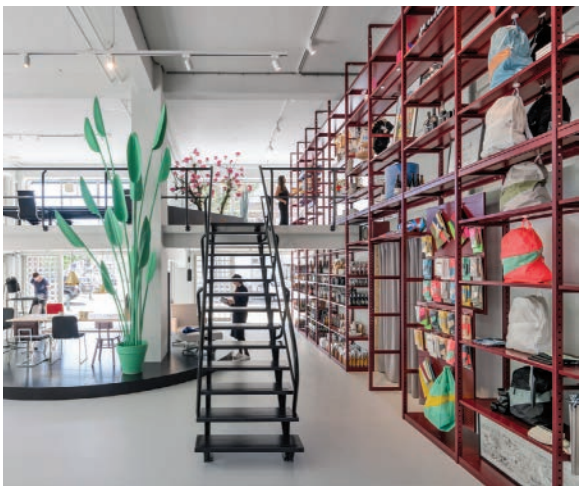
M + M Creative Studio, Edmunds.
Photo by Benny Chan.

A rectangular space can be broken up into different zones to accommodate distinct seating areas.



Architecture + Information, Canvas Worldwide.
Photo by Michael Wells.

The formality of a tall and long room is ideal for both work and entertaining.



MVRDV, The Groos Store.
Photo by Ossip van Duivenbode.

Rooms in a Choreographed Sequence of Spaces

Rooms can be arranged as a proportional related sequence of spaces. The richest sequences of rooms typically contrast rooms of different but related proportions to create visual variety and to provoke a sense of discovery. Strategies that consider contrasting proportions of rooms also seek contrasting qualities of light to enliven the itinerary.



Tusen Takk, Leland, Michigan. Photo by Matthew Millman.

DETERMINING PROPORTION

Proportions are determined and appreciated in one of two ways: either through the informed intuition of the designer or through a rule system established by the designer. When designers use a rule-based proportioning system, they typically employ it opportunistically—following the proportioning system when helpful and ignoring it when other design criteria prove to be more important.

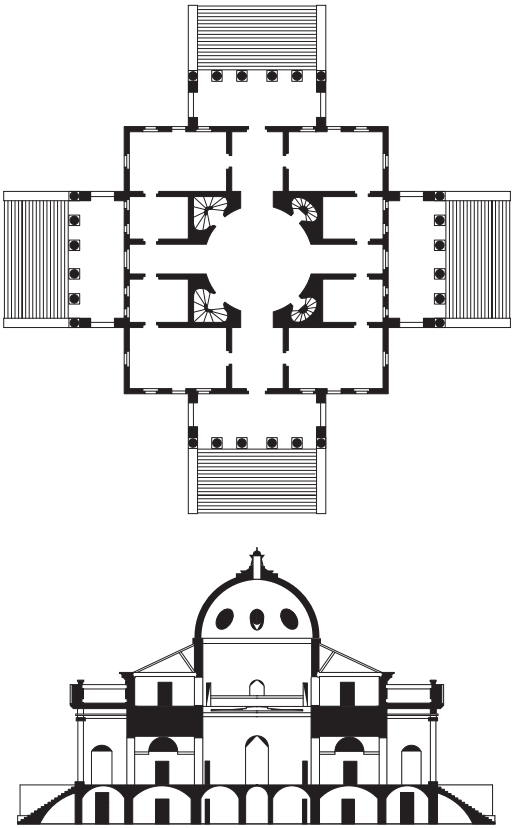
An Intuition for Proportion

Talented designers have an innate sense of proportion. In fact, this is one of the essential skills that every artist and designer needs to develop. When proportions are considered intuitively, expressions such as “relative weight,” “balance,” and “designing the space in-between” may capture the synthesis of visual choices during design. Appreciating proportions can also be an act of connoisseurship. To speak of a “beautifully proportioned façade” suggests a recognition of an overall balance among the proportions of the windows, the spaces between the windows, and the proportion of the wall itself. When proportions are designed and appreciated intuitively, the visual tastes of the creator and observer play an important role. Some designers prefer dynamic compositions with strongly contrasting proportions, while others may seek stasis and balance. The history of visual styles is partly the history of the changing tastes for proportional and compositional strategies.

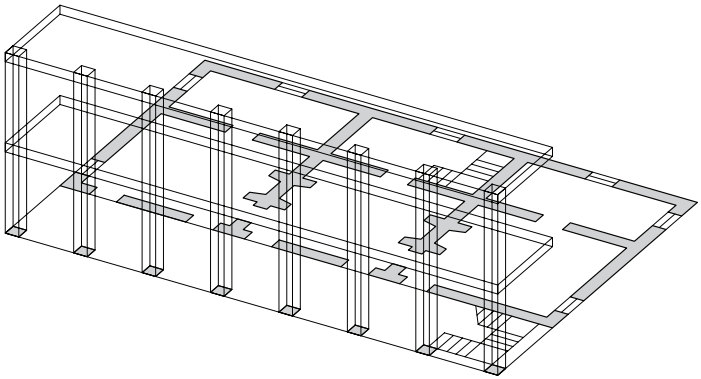
Whole-Number Proportions

Rule-based proportioning strategies, by contrast, begin with a geometric system that associates the various lengths of an object or space with mathematical ratios. The most common of these systems relates the length, width, and height of a room in simple whole numbers. For example, a rectangular room can be qualified as a room that is twice as long as wide with a ceiling as tall as its width. Such a room can be defined as a simple whole-number proportion: 1:2:1.

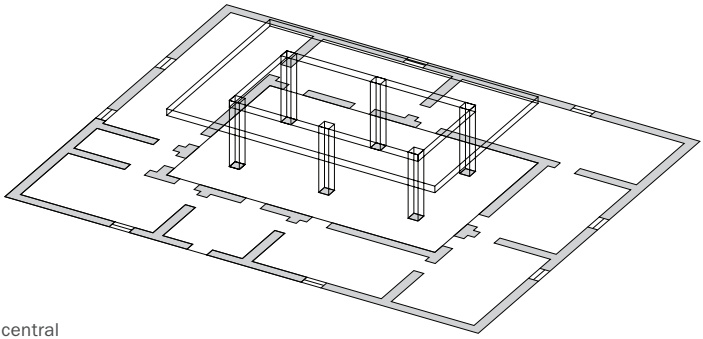
Andrea Palladio famously used a whole-number proportioning system to design and organize the rooms for his palace and villa commissions in the sixteenth century. The plans of the rooms in Palladio's buildings are typically organized in whole-number ratios of 1:1 (the square) or rectangles of 1:2, 2:3, and 3:5. Significantly, he avoided other ratios such as 3:4 or 4:5 because the resulting shapes sit uncomfortably between the stable square and the directionality of the rectangle.



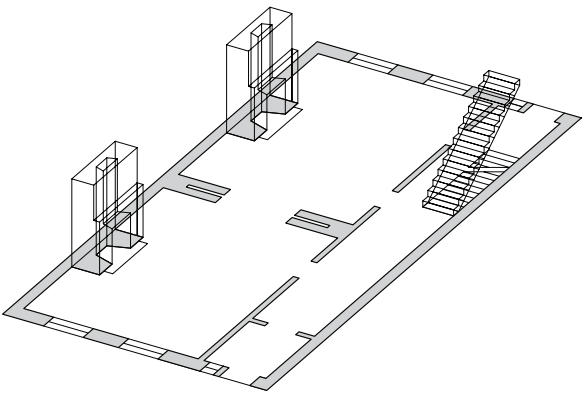
Plan and section of Villa Capra by Palladio



Freestanding house with rooms organized along a south-facing double-story portico (Charleston, South Carolina)



Attached or freestanding central courtyard (California and the American Southwest)



Attached row house with a stair and corridor along one of the common walls or in the middle of the plan sandwiched between exterior-facing rooms (the American Northeast and Midwest)

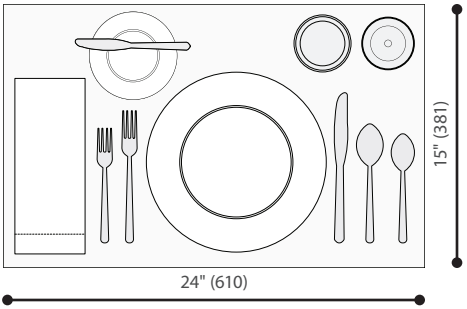
DINING ROOMS

The configuration of the dining room is predicated on the size and shape of the dining table. Otherwise, the dining room allows for a great deal of design flexibility. Once a formal room occupied primarily on special occasions, the dining room today lends itself to a wide range of interpretations and can accommodate a variety of lifestyles. The dining room can be an extension of the kitchen, a zone within a large living room, or a separate room organized around the specific rituals of enjoying a meal. Regardless of the configuration, the dining room should be immediately adjacent to the kitchen work areas for easy delivery and cleanup of meals.

Dimensional Criteria

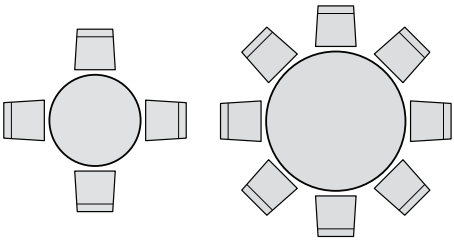
Place Settings

The dimensions of a dining table relate directly to the area required for a place setting. The approximate area of a place setting is 24 inches (610 mm) wide by 15 inches (381 mm) deep. Although the standard dimension for a placemat is 18 inches (457 mm) across, additional area is allocated for serving dishes, wine bottles, and elbow room.



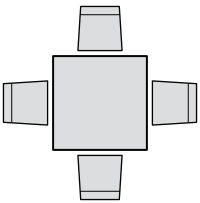
Dining Tables

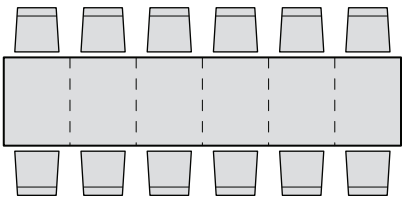
The average table manufacture allows 24 inches (610 mm) per person; however, other elements must be considered when selecting the right table for a specific number of guests. For instance, a dining chair with arms increases the amount of space required for an individual by 4 inches (102 mm) on average. The location of table legs may also determine the number of people that can sit comfortably at a table. A variety of table configurations are shown here.



To determine the size of a round table, multiply number of seats by width of place setting (26" [660] +/-) and divide by 3.14.

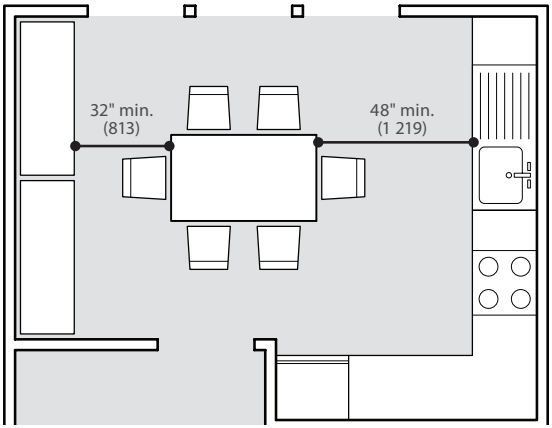
A square table for four can be expanded lengthwise in 24-inch (610 mm) increments for additional seating.





Dining Room Layouts

The size and shape of a room can help to determine the best table configuration for a specific situation. The diagrams that follow look at dining rooms combined with a living room or kitchen as well as dining rooms of minimal dimensions. In addition to tables and loose furniture, interior designers must consider the ambience of a room by including adjustable lighting above the table and near the serving area.

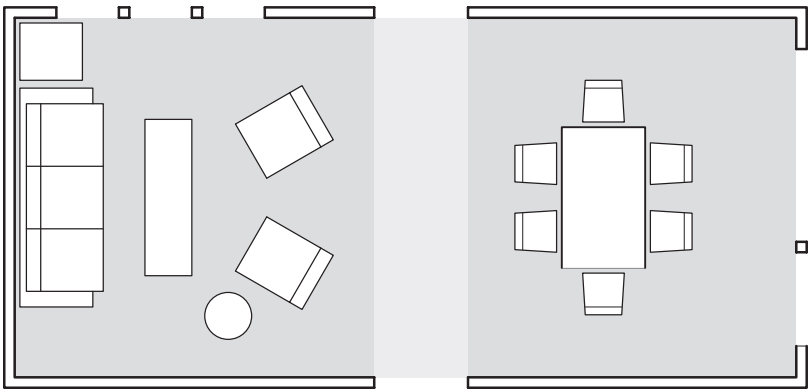


Combined Dining and Kitchen

Kitchens with an eat-in dining table require additional space adjacent to the work zones.

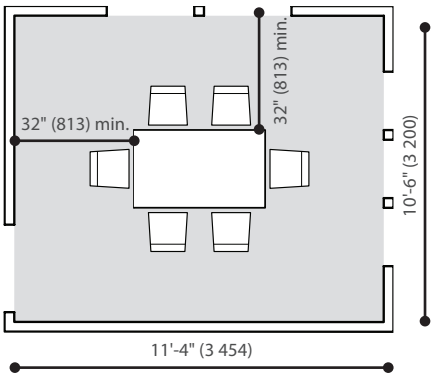
Combined Dining and Living Room

When space is at a premium, combining the dining and living rooms may be better than isolating them into separate smaller rooms.



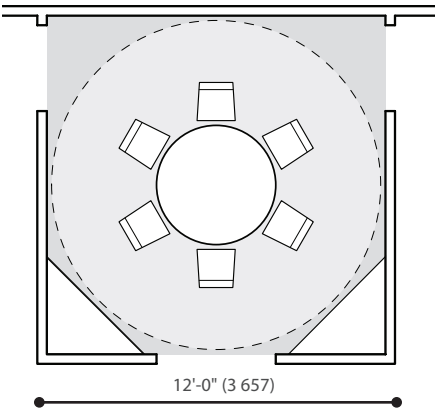
Minimal Dining Room: Rectangular Table

The minimum size of a dining room is based on the size of a rectangular table with 36 inches (914 mm) of clearance on all four sides.



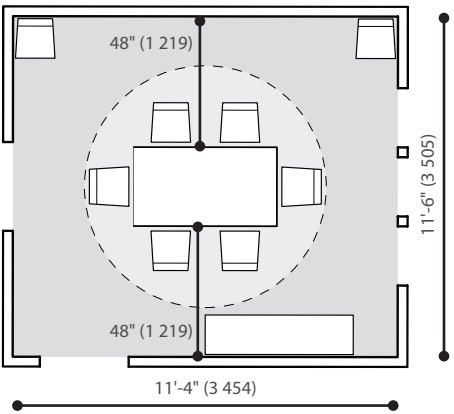
Minimal Dining Room: Round Table

A round table in a square room allows space for cupboards or built-in cabinets in the corners.



Dining Room with Additional Furniture

An ideal dining room allows space for two additional chairs and a buffet table in the room.

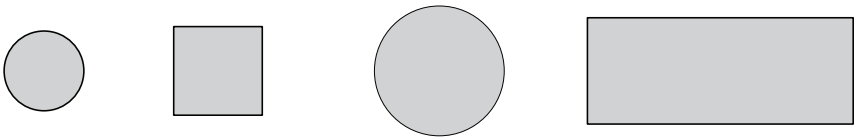


LIVING ROOMS

Of all the rooms in a house, the living room has the fewest constraints since it requires neither appliances, nor plumbing fixtures, nor storage. As a result, interior designers have a great deal of freedom in terms of the character and configuration of the space. The living room should be designed to reflect the particular lifestyle of a family.

Typical Furniture Dimensions

Specific functional requirements and the size and shape of the room will help set the agenda for selecting and arranging the most appropriate furniture. Below are the dimensions of typical living room furniture. Be mindful that the dimensions of specific pieces may vary from the typical sizes. Furniture that diverges widely in dimension from these examples may be uncomfortable and impractical, however.

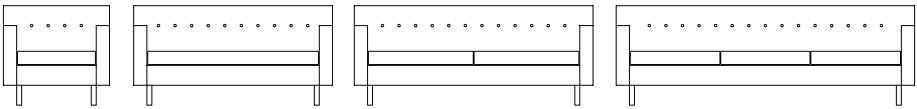


Round Table
18–24" (457–610) dia.

Square Table
24–30" (610–762)

Coffee Table
48" (1 219) dia.

Rectangular Coffee Table
24" (610)
54" (1 372)



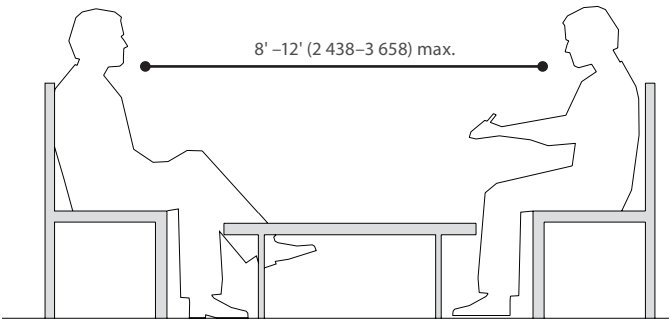
3' (914)
Club Chair

5' (1 524)
Love Seat

6' (1 829)
Sofa

7'-6" (2 286)
Sofa

The distance between chairs and sofas can influence the behavior of the occupants of a space. Two people sitting across from each other must be within a specific dimensional range for conversation to be comfortable. The behavior of larger groups of people around and across a coffee table is also affected by the relative intimacy of the furniture arrangement.



OFFICE ENVIRONMENTS

Elements



The contemporary office contains a multitude of furniture types and other elements that facilitate new modes of work and interaction. This new thinking encourages collaboration and engagement and as a result, presents unique design challenges. The following is a brief overview of these spaces:

Furniture Systems

Traditional systems of core-perimeter workstations still have a presence in spaces where independent work occurs. The design of these systems have also evolved to embrace the nomadic and more collaborative workspace. Often not tied to a single person, or even a type of work, they are deployed with various levels of privacy and separation. They remain based around surfaces for work and storage and can accommodate varying positions of the body, from seated to standing.

Common Spaces

Whether incorporated into a semiprivate meeting rooms or integrated into an open plan, common spaces offer flexibility and opportunities for informal collaboration. Various types such as pods, bleachers, conversation nooks, and low tables with seating provide many opportunities for chance encounters. Many of these spaces also incorporate features needed for productivity and connection, while retaining the casual feeling of a lounge.





Focus Rooms

Focus rooms provide areas where quite conversations, phone calls, and client meetings occur, with higher levels of acoustic and visual separation.



Acoustics

As office spaces become more flexible, open, and collaborative, the need for acoustic control has increased. Conversations, phone calls, and meetings often overlap and reverberate.



RESTAURANT ENVIRONMENTS

Restaurant types range from utilitarian fast-food purveyors to full-service restaurants with elaborate themes. Restaurant design encompasses a great number of issues regarding adjacencies, kitchen layouts, lighting, acoustics, and so forth. The interior designer must be familiar with each, especially with the dimensional criteria for seating layouts.

Before planning the seating layout, the designer must understand the restaurant concept. The concept should define the type of dining experience offered, the intended clientele, the hours of operation, and the menu. If the restaurateur's idea is to put the workings of the chef on display, for example, then the seating should be arranged so that the kitchen is visible from every table. Equally, the spacing between tables can have a substantial impact on the character of a restaurant. Tables closely packed will result in a loud and lively space, since patrons need to compete with their neighbors to be heard. Conversely, tables spaced far apart tend to separate diners into quieter pockets of conversation.

Types of Seating

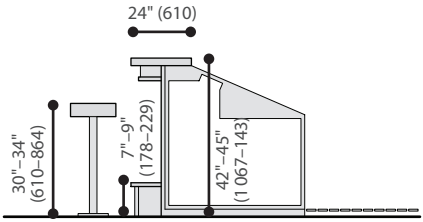
Restaurant seating falls into three general categories: loose chairs, built-in seating (for example, banquettes), and bar seating. Seat height is typically 17 to 18 inches (432 to 57 mm) at a table or low counter. Bar seating typically ranges from 30 to 34 inches (762 to 864 mm) in height. All seats should be a minimum of 16 square inches (406 mm^2). For the full-service dining experience, consider the use of padded seats and armchairs for ease of getting in and out of the seat.

Tables and Counters

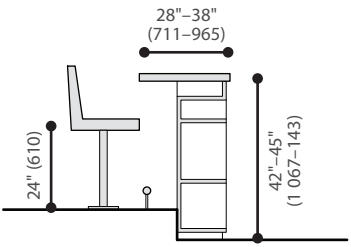
In the restaurant trade, tables are known as tops. The most common sizes are two tops (seating two people) and four tops (seating four people). Beyond these sizes, tables are typically combined or expanded. Some tables have flip-up corners, which convert a square table seating four to a round table seating six people. Table height is typically 30 inches (762 mm). A square table with a minimum dimension of 36 inches (914 mm) across can accommodate four people. A square table with a minimum dimension of 24 inches (610 mm) across is acceptable for two; however, 30 inches (762 mm) is preferable. Smaller tables are acceptable when only drink service is provided. Counters range in height from 28 to 36 inches (711 to 914 mm); however, the Americans with Disabilities Act (ADA) requires that 60 linear inches (1 524 mm) of a counter be no more than 34 inches (864 mm) high to accommodate patrons in wheelchairs.

MINIMUM TABLE DIMENSIONS

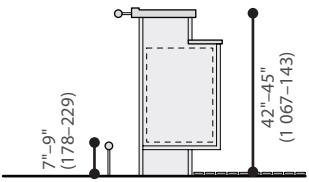
Shape	Seats	W	L
Square	2	24", 30" (610, 762)	24", 30" (610, 762)
Square	4	36" (914)	36 (914)
Round	4	36"–42" (914–1 067) dia.	
Round	6	42"–48" (1 067–219) dia.	
Round	8–10	66" (1 676) dia.	
Rectangular	4 (2 per side)	30" (762)	42"–48" (1 067–219)
Rectangular	6 (3 per side)	30"–36" (762–914)	72"–84" (1 829–2 134)
Rectangular	8 (2 per side)	36" (914)	90"–106" (2 286–692)



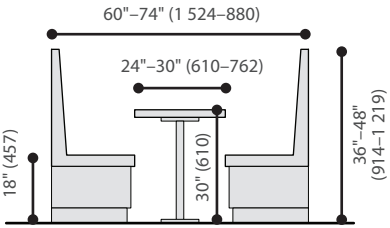
Working Counter



Dining Counter



Standing Counter



Banquette

These sections describe ideal vertical dimensions. Please note that all vertical dimensions are subject to local building code and accessibility regulations.

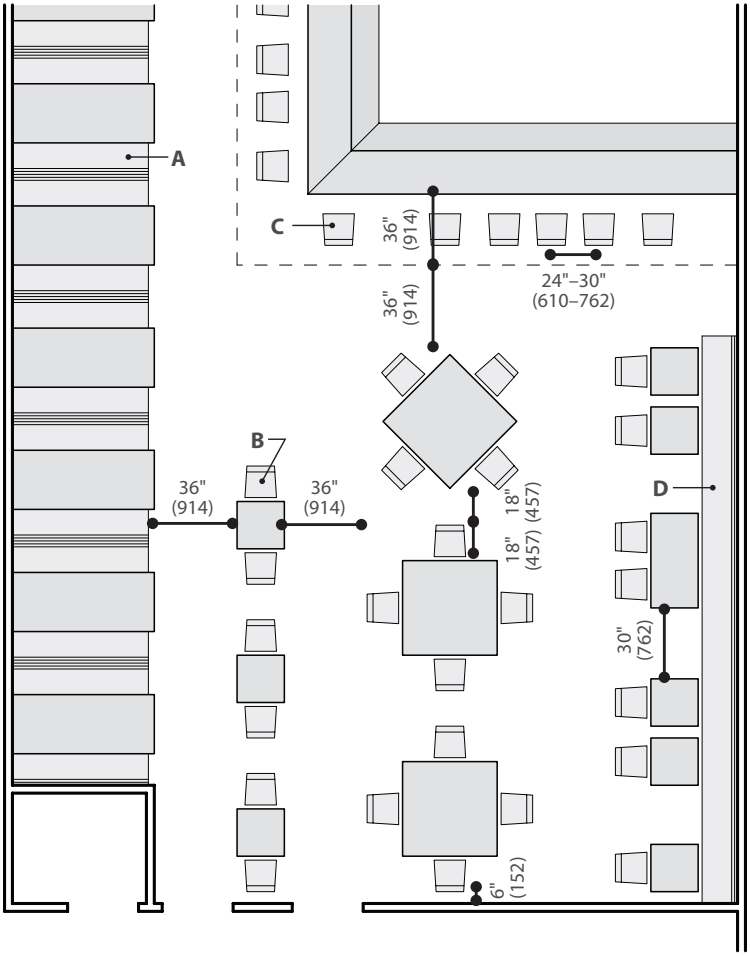
Typical Restaurant Layout

A Banquette

B Table Setting

C Bar Seating

D Wall Seating



The plan notes minimal dimensions for access aisles, limited-passage, and no-passage aisles. Wheelchair-accessible aisles are required from the restaurant's entry to the accessible seating and restrooms.

Design Considerations

Spacing between Tables

As long as the spacing between tables meets the minimum dimensions required for an access aisle, the spacing is subjective and driven mostly by the restaurant concept. Full-service restaurants provide more space between tables for a comfortable dining experience, while fast-food restaurants maximize the number of seats. The access aisle dimension is determined by the local building code and by the ADA, which specifies a minimum width of 36 inches (914 mm) in the access aisles and also requires that all accessible tables be located adjacent to an access aisle.

Interior Finishes

Interior finishes are the most tangible elements that a designer can use to describe the type and quality of the restaurant. Certainly, materials appropriate for the public areas will differ from those appropriate for the kitchen; but in both areas, fire-retardant materials must be utilized. In addition to the quality of the materials specified, it is important to consider their maintenance standards to ensure their suitability for the type of restaurant.

Lighting

The ambiance of a restaurant will be informed by the lighting design. Low-level mood lighting is typical of fine dining, while bright lighting offers a more casual dining experience. Over the course of a day, restaurants can change the lighting to suggest different moods. Most restaurant lighting is incandescent because of the warm tones that the lamps provide; however, fluorescent lighting is more energy efficient and may be more appropriate in the kitchen areas.

Acoustics

The acoustics in a restaurant go hand-in-hand with the concept. In some restaurants, for example, the reverberation of hard surfaces adds to the desired effect of the dining experience. There are a number of ways to control the acoustics in an environment, as long as the desired effect is understood. The simplest way to control acoustics is through sound-absorptive materials. These can range from carpet on the floor to fabric paneling on the walls to sound-absorptive tiles in the ceiling. Another strategy worth considering is to compartmentalize the restaurant into different types of rooms with different noise levels to suit the various patrons.

Chapter 8: Code and Accessibility

Building codes and the Americans with Disabilities Act (ADA) are the two basic standards with which the interior designer needs to comply. The building code is specified by the jurisdiction in which a project will be built. These codes can be defined by a state, county, township, or city and are typically based on a national model such as National Building Code (BOCA), International Building Code (IBC), International Residential Code (IRC), and Uniform Building Code (UBC). The main focus of these codes is to secure the public's life safety. Codes are frequently amended, and designers need to know which edition the jurisdiction is adhering to during the permitting timeframe of a specific project.

ADA was passed in 1990 to secure civil rights protections for people with disabilities. Unlike the building code, ADA includes design guidelines and requirements based on the principle of equality for people with disabilities. Compliance with the building code thus does not mean compliance with ADA, and vice versa. ADA is the national accessibility code, and as with the building code, jurisdictions have interpretations of the guidelines that are specific to the governing municipality. It is reasonable to assume that these guidelines are written for public facilities and not for private use.

The terminology of the building code and accessibility guidelines are not always the same. While interpreting a code or guideline, it is important to reference the correct definitions.

KEY TERMS AS DEFINED BY ADA

Access Aisle: Accessible pedestrian space between elements such as parking spaces, seating, or desks that provides appropriate clearances per the ADA guidelines.

Accessible: Site, building, facility, or portion thereof that complies with the ADA guidelines and that can be approached, entered, and used by persons with disabilities.

Accessible Route: Continuous, unobstructed path connecting all accessible elements and spaces within or between buildings or facilities. Interior accessible routes may include corridors, floors, ramps, elevators, lifts, and clear floor space at fixtures.

Accessible Space: Space that complies with ADA regulations and can be used by persons with disabilities.

Adaptability: Ability of certain buildings, spaces, and elements (e.g., kitchen counters, sinks, grab bars) to be added to or

altered so as to accommodate the needs of persons with or without disabilities or with different types of degrees of disability.

Adaptable: Able to readily be made accessible to, functional for, and safe for use by persons with disabilities without structural change.

Area of Rescue Assistance: Area with direct access to an exit, where people who cannot use stairs may remain temporarily in safety to await further instructions or assistance during an emergency evacuation.

Automatic Door: Door equipped with a power-operated mechanism and controls that open and close the door automatically. The switch that begins the automatic cycle may be a photoelectric device, floor mat, or manual switch.

Bathroom: Space or series of interconnected spaces that contain a toilet, sink, and bathtub or shower.

Change of Use: Varying the use of a building from a private to a public one.

Clear: Unobstructed.

Clear Floor Space: Minimum unobstructed floor or ground space required to accommodate a single, stationary wheelchair and occupant. Unless otherwise stated, the dimensions of clear floor space shall be 30 by 48 inches (762 by 1 220 mm).

Common Use: Refers to those interior and exterior rooms, spaces, or elements that are made available for the use of a restricted group of people.

Detectable Warning: Standardized surface feature built into or applied to walking surfaces or other elements to give warning of hazards on a circulation path.

Dwelling Unit: Unit providing living facilities for one or more persons.

Egress, Means of: Continuous and unobstructed path of travel from any point in a building or structure to a public way, consisting of three separate and distinct parts: the exit access, the exit, and the exit discharge. A means of egress comprises the vertical and horizontal means of travel and should include intervening room spaces, doorways, hallways, corridors, passageways, balconies, ramps, stairs, enclosures, lobbies, horizontal exits, courts, and yards.

Entrance: Any access point to a building or portion of a building or facility that is used for the purpose of entering. An entrance includes the approach walk, stairs, lifts, ramp, or other vertical access leading to the entrance platform; the entrance platform itself; vestibules; the entry door(s) or gate(s); and the hardware of the entry door(s) or gate(s).

Ground Floor: Floor of a building closest to the level of the exterior grade and any floor within 36 inches (914 mm) of an exterior grade at some or all of its perimeter. Buildings on sloped sites may have more than one ground floor.

Half Bathroom: Space with a toilet and a sink.

Loft: An intermediate level between the floor and ceiling of any story, located within a room or rooms of a dwelling.

Mezzanine or Mezzanine Floor: Intermediate level between the floor and ceiling of any story with an aggregate floor area of not more than 33 percent of the floor area of the story in which the level is located.

Occupiable: Room or enclosed space designed for human occupancy in which individuals congregate for amusement, education, or similar purposes or in which occupants are engaged in labor and which is equipped with means of egress, light, and ventilation.

Ordinary Repairs: Any maintenance that does not affect structure, egress, fire protection systems, fire ratings, energy conservation provisions, plumbing, and sanitary, gas, electrical, or other utilities.

Power-assisted Door: Door with a mechanism that helps to open the door or that reduces the opening resistance of the door, on the activation of a switch or a continued force applied to the door itself.

Ramp: Walking surface that has a running slope greater than 1:20 but no greater than or equal to 1:12.

Reasonable Modification: Physical changes to multiple dwellings requested by persons with disabilities or their agents to enable full use and enjoyment thereof.

Remodeling: Modification beyond an interior decoration or involving any structural changes or the redecorating of a public building for which the cost of such refurbishing, updating, or redecorating equals or exceeds 5 percent of the full and fair cash value of the building.

Repair: Reconstruction or renewal of any part of an existing building for the purpose of its maintenance.

Sleeping Accommodations: Rooms in which people sleep; for example, dormitory and hotel or motel guest rooms or suites.
Space: Definable area; for example, a room, toilet room, hall, assembly area, entrance, storage room, alcove, courtyard, or lobby.

Story: Portion of a building between the upper surface of a floor and the upper surface of the floor or roof next above. This portion of the building must include occupiable space to be considered a story. There may be more than one floor level within a story, as in the case of a mezzanine.

Structural Changes: Major reconstruction of walls or partitions or relocation of bearing walls or partitions. Minor alterations, including the opening of wall sections and/or the relocation of equipment or fixtures, are not considered structural changes.

Tactile: Describes an object that can be perceived using the sense of touch.

Tactile Warning: A surface texture applied to or built into walking surfaces or other elements to warn visually impaired persons of hazards in the path of travel.

Unassisted Access: Condition that enables a person with a disability to obtain information about and to maneuver a path of travel without the assistance of another person, except at those points and under those conditions in which individuals without disabilities would need assistance from another person. This definition does not restrict the right of a person with a disability to request and receive assistance.

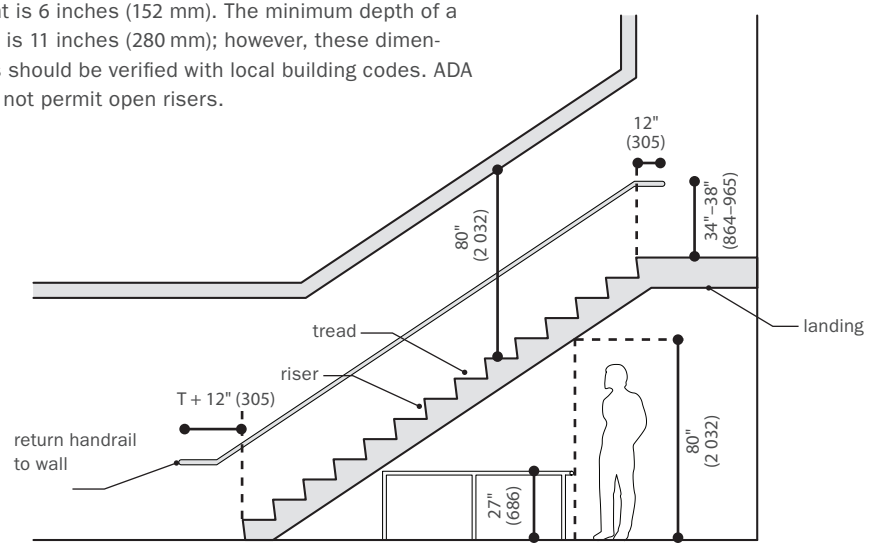
Use: Purpose for which a building is designed, used, or intended to be used.

Walk (Walkway): Interior or exterior pathway with a prepared surface that is intended for pedestrian use, including, but not limited to, general pedestrian areas such as plazas, courts, and crosswalks.

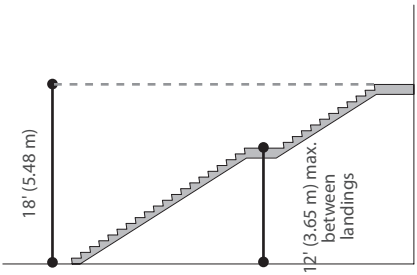
VERTICAL CIRCULATION

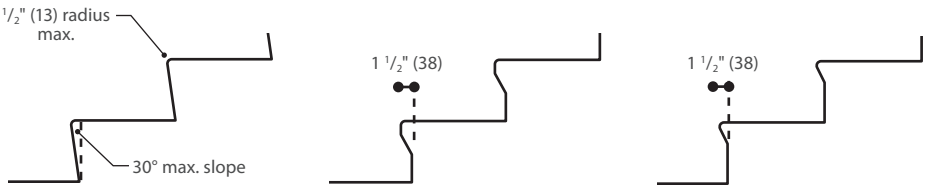
Stairs

ADA requires that all steps in a flight of stairs have uniform riser and tread dimensions. The minimum riser height is 4 inches (102 mm) and the maximum riser height is 6 inches (152 mm). The minimum depth of a tread is 11 inches (280 mm); however, these dimensions should be verified with local building codes. ADA does not permit open risers.



A rule of thumb for a well-proportioned stair is that the sum of two risers plus one tread should equal between 24 and 25 inches (610–35 mm). For example: (2) 6" risers + 13" tread = 25" or (2) 152 mm risers + 330 mm tread = 482 mm.





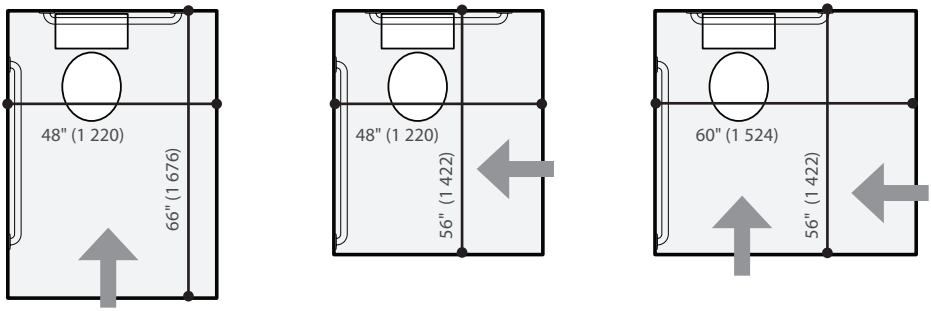
Flush Riser

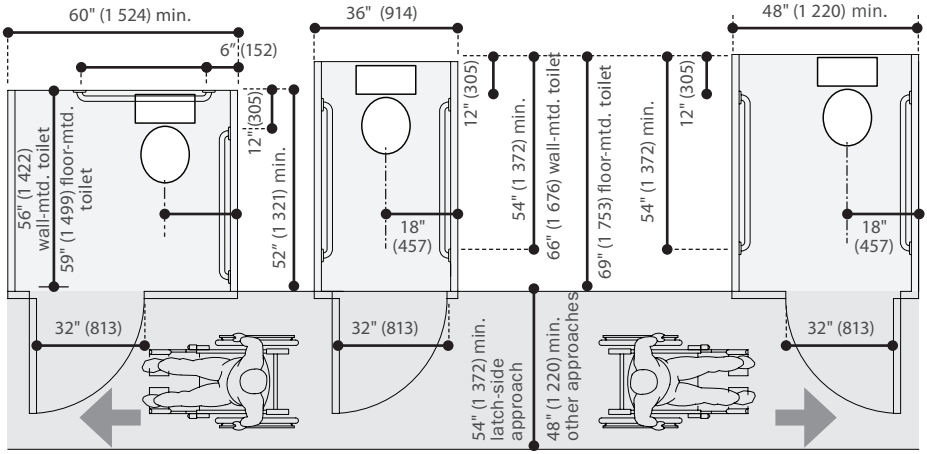
Beveled Nosing

Curved Nosing

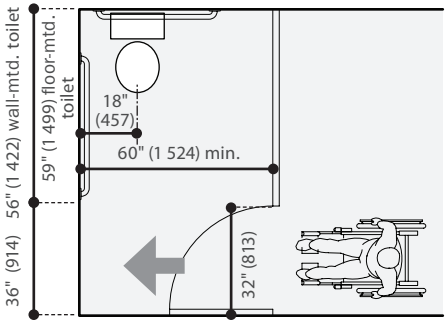
BATHROOMS

Toilet Stalls

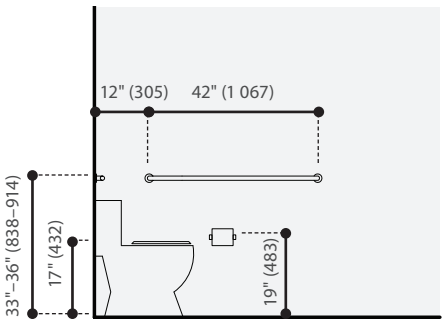




Standard Stall Ambulatory Accessible Stall Mid-Row Stall



End-of-Row Stall



Side-Wall Elevation

Simultaneous Contrast

Simultaneous contrast occurs as an optical illusion: The complementary color of an applied color is not itself objectively present, but appears to be visible. Simultaneous contrast requires an adjacent neutral color or any other color that is not complementary. The longer a background is viewed, especially with more luminous colors, the greater the intensity of the simultaneous effects.



Simultaneous contrasts are difficult to capture photographically. In the Montréal Convention Centre, Saia Barbarese Topouzanov playfully uses light against painted color to suggest additional colors. As the sun changes position and color over the course of a day, new combinations appear.



Saia Barbarese Topouzanov Architectes; Tétreault Parent Languedoc et Associés; and Hal Ingberg. Photo by Marc Cramer.

Contrast of Saturation

Color can be diluted via four methods to obtain different results: Adding white makes a color cooler; adding black reduces the overall vitality of a color and renders it more subdued and, in the absence of light, quite dark; adding gray reduces the intensity of a color and tends to neutralize it; adding the complementary color produces various effects, depending on the intensity of the colors being mixed, their relative temperature, and their hue.

A library at the Rhode Island School of Design by Office dA uses a natural palette that lends itself to a contrast of saturation. Various shades of browns and yellows allow this intervention to fit nicely within the classical architecture it occupies. Accents of cooler colors in the existing architecture also contribute to the scheme's success.





Office dA. Photo by John Horner.

Contrast of Extension

Contrast of extension refers to the relative force that a color exerts in relation to the other colors in a system. Depending on the hue and value of a color, careful consideration must be taken to balance the addition of another color. The result is a ratio that harmonizes the colors in play. Of all the contrast rules, this is perhaps the most subjective.



Balance is the fundamental principle behind the contrast of extension. In this maisonette apartment, Ippolito Fleitz Group uses color balance effectively—mixing strong contrasting colors, intense graphic elements, and textiles in a complex sequence that achieves a sense of equilibrium.



Maisonette P155 Apartment by Ippolito Fleitz Group. Photo by Eric Laignel.

Emphasizing Design Elements

Emphasizing the elements of a design—door and window trim, reveals at the ceiling, or the connection of materials—can draw the viewer's attention to aspects of the design. Painting elements such as reveals in the ceiling a darker color than adjacent objects can make the objects appear to float. Emphasizing the color of a door in a wall can cue the viewer to its importance. A red door in a white wall will seem more present in the room than a door within a wall of the same color.



Color can be employed to make certain aspects of a design stand out. For instance, elements such as trim, moldings, and structure take on more significance when they are colored in stark contrast with their surroundings.



Connections emphasized between spaces can use very bold, bright hues or be made to recede when matched to the color of an adjacent surface.

Changing the Proportions of a Room

Color can change how the proportions of a room are perceived. Adding color to a certain datum, altering paint sheen, or darkening a room's upper portions are some of the strategies by which the designer might play with spatial perception. Through the careful application of color, spaces can be made to appear smaller or larger, or an eccentric volume can be proportionally controlled. Using color in geometric and abstract patterns can further enhance a space.



Adding color to lower parts of a space can provide a demarcation line for elements such as furniture and art.



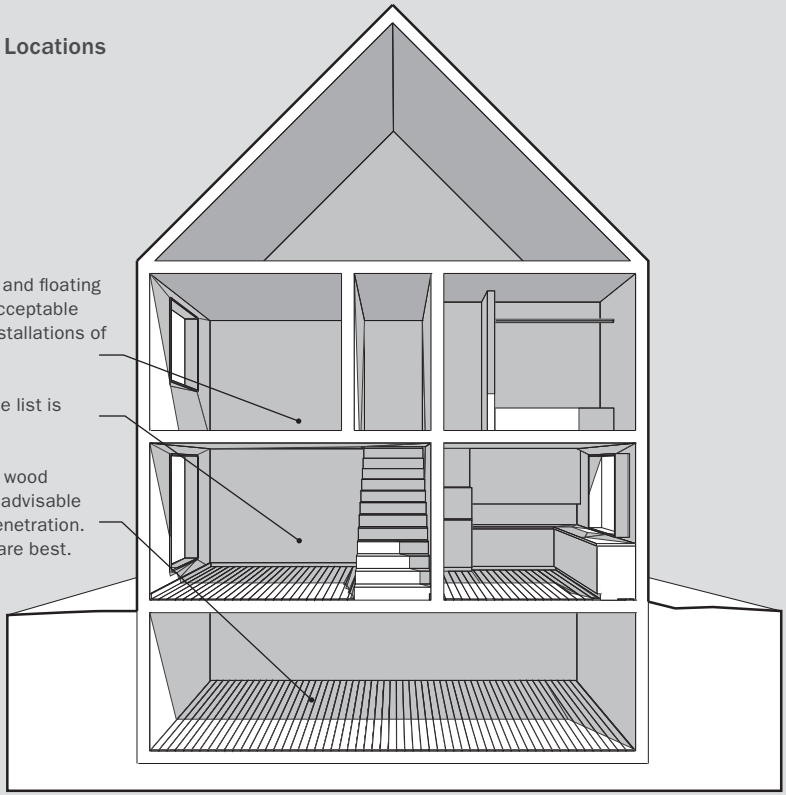
Adding color to the upper regions of a space can reduce the perceived height of a room.

Wood Flooring Locations

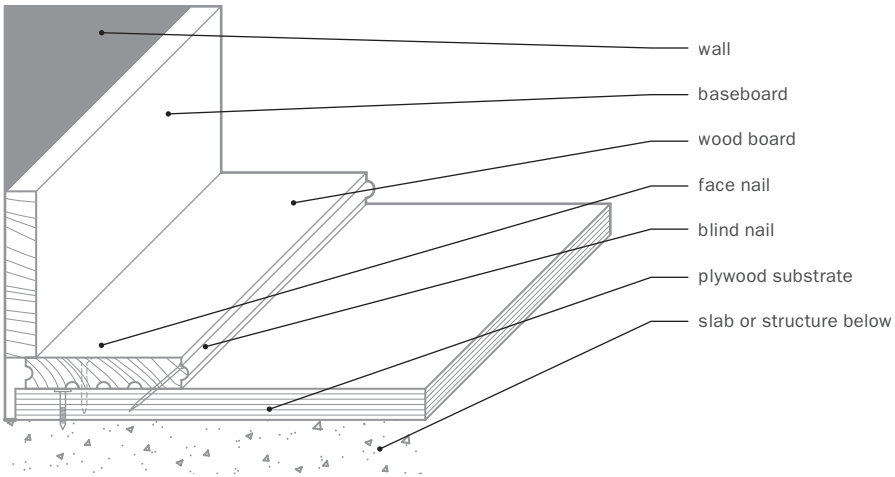
Solid, engineered, and floating installations are acceptable for above-grade installations of wood flooring.

On grade, the same list is applicable.

Below grade, solid wood installations are inadvisable due to moisture penetration. Engineered floors are best.



Typical Installation



CARPET

Of the materials used for flooring, carpet may be the most difficult to qualify. Carpets cover 70 percent of floors in residential and commercial environments in the United States alone. Given the enormous variety of types and styles, from mass-produced to custom-designed, it is difficult to condense the choices, applications, and installation methods for different types of interiors. Carpets, however, offer many advantages: *Texturally*, they lend both visual and sensual qualities to a room; *acoustically*, they excel at absorbing and dampening sound; they are very *easy to clean*; they are *naturally insulating*; and their *range of color and pattern* is limitless.

Residential versus Commercial

Many carpet companies divide their product lines into residential and commercial applications. This distinction may seem obvious at first, but the material properties and qualities of carpets for each differ in their requirements for installation and maintenance.





Photos courtesy of InterfaceFLOR.

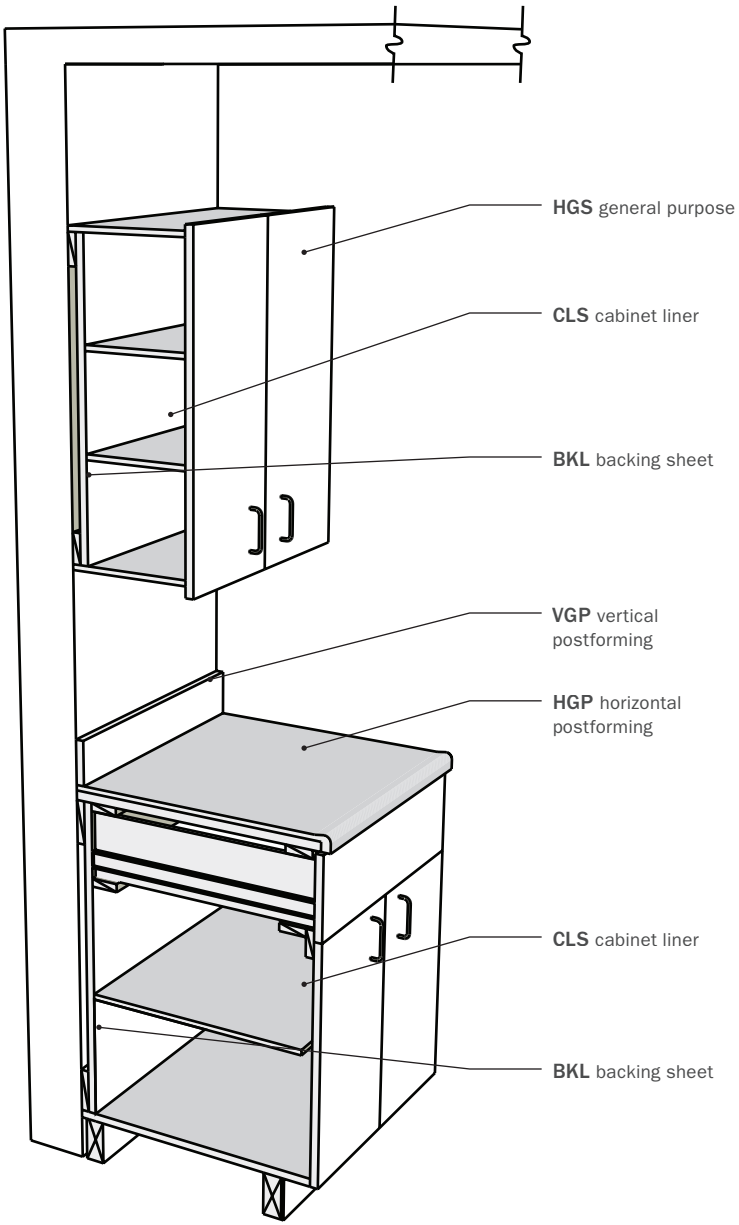
Residential Carpet

In choosing carpets for residential projects, designers should consider the following: the *amount of traffic* on the floor, the adjacency of the floor to *natural light*, and the *transition* from the carpet to hard or resilient flooring. Carpets in residential applications must also take into account the specific users of a space; for example, a carpet might need to be child- or pet-friendly. Residential installations do not have to be wall-to-wall; area rugs, when used in tandem with another floor surface, can provide a focus for specific furniture elements.

Commercial Carpet

Commercial carpets need to withstand the use of several times the number of people as in a residential application. Additionally, they may need to *perform under the stress* loads of equipment such as luggage, wheelchairs, and other transport devices; low-cut pile with a dense construction is the correct choice for these areas. Cut piles, especially high density, are well suited to concealing traffic lines and the dirt that can accumulate in areas of high activity. They are also recommended for offices, reception areas, and boardrooms in a work environment.

Laminate Locations



TEXTURE AND COLOR

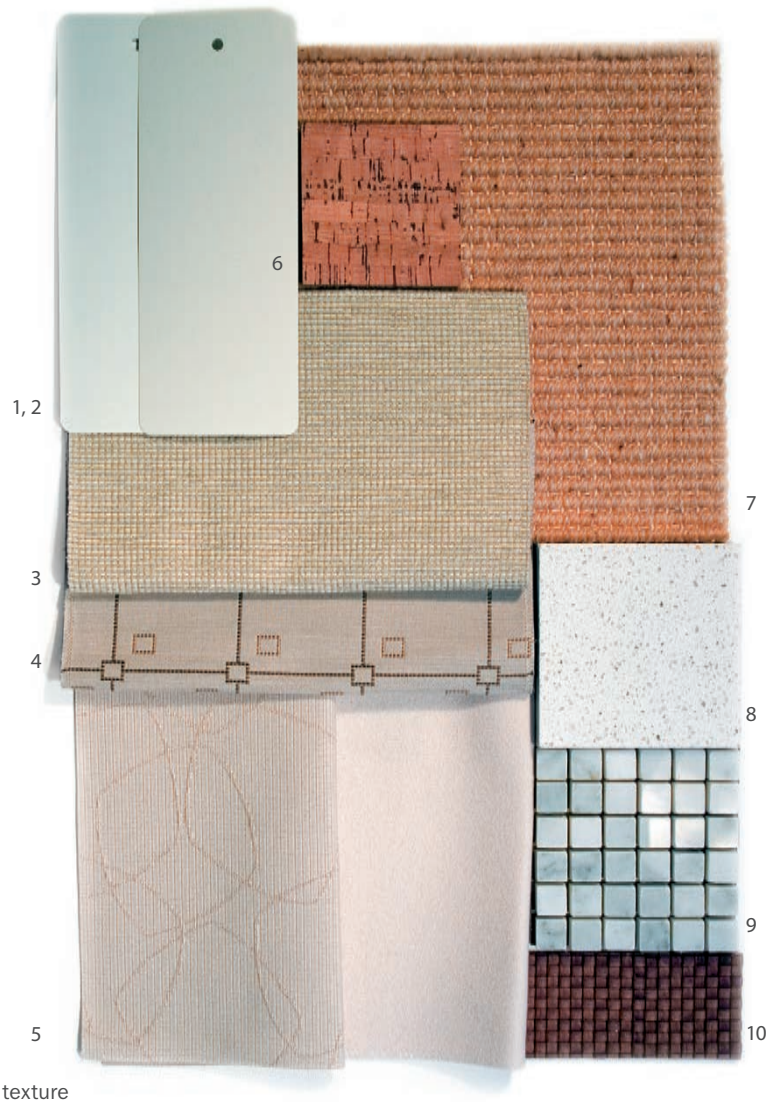
The interactions of color, material, and texture, in turn reacting to light, all contribute to the character of an interior environment. More specifically, color value has a direct effect on how a material translates its visual or tactile qualities. Three general families of palettes have different implications for the role of texture within the overarching design concept: the white, neutral, and dark palettes.

White Palettes

With white color palettes, the shadows created by differences in material textures are more pronounced; as a result, this palette strategy often foregrounds texture as the primary design concept. A white palette is most successful with an abundance of natural light to highlight the contrast in surfaces and textures. For instance, the shadows of window shutters can cast strong patterns on surfaces that add to the richness of the finishes. This palette can also benefit materials with natural textures such as linens and sisal carpets. When paired with dark contrasting elements such as an ebonized floor or lacquered surface, a white palette can be refreshing and bold, but it demands meticulous maintenance and may not be practical for many clients.



Tow Studios Architecture, Village Duplex, New York. Photo by Bjorg Magnea.



1 Paint
2 Paint
3 Fabric, woven texture
4 Fabric, pattern
5 Fabric, pattern
6 Cork
7 Sisal carpet
8 Quartz solid surface
9 Marble mosaic tile
10 Leather, woven

Neutral Palettes

Neutral palettes are the least risky from a design standpoint, the easiest to get approved by a client, and the most difficult to transform into a sophisticated scheme. A neutral palette has fewer associations with a particular era and is therefore unlikely to become dated. On the other hand, this approach runs the danger of being banal if a rich range of textures and materials is not achieved. Neutral palettes can easily incorporate many natural materials such as wood, cork, and stone to balance tactile textures with visual textures. When accent colors are injected into a neutral palette, they need only be applied in very small areas to create an overall compositional balance.



Deborah Berke, James Hotel. Photo by Eric Laignel.

Neutral palettes cover a large spectrum of color, from creamy to cool gray tones. This range needs to be carefully matched with the appropriate natural materials, including wood, stone, and metal.

Creamy tones work well with medium-toned woods such as oak and anigre, warm stones such as limestone and travertine, and warm metals such as bronze and copper. Cool gray tones work well with dark woods such as walnut and ebony, lighter stones such as arabescato classico or thassos marbles, and cool metals such as stainless steel and chrome.

Dark Palettes

In general, darker palettes require more textural contrast than lighter palettes because shadows are not as legible. As a result, dark palettes may rely more on reflection than material relief for textural contrast. Some reflective materials to consider are polished stone such as absolute black granite and black lacquered furnishings. Dark material palettes should include lighter contrasting wall surfaces so that the room does not become oppressive or gloomy.

Textures and Lighting

Both artificial and natural lighting affect the visual quality of textures. Shadows penetrating a room can provide visual interest, while reflected surfaces add depth to the overall composition.



Ali Tayar, The OMNIA, Switzerland. Photo by Bruno Augsburger.



Patterns with vertical lines can add height to a room with low ceilings. Curtains with vertical lines that extend from floor to ceiling will make a room look taller. Conversely, patterns with horizontal lines can make a room or a piece of furniture look wider.



Pattern has an effect on the mood of a space. A floral pattern on a surface will create a much different feeling than a geometric pattern on the same surface. Patterns are expressive of style and sensibility and immediately set the tone for an interior environment.

Custom Patterns

The designer can incorporate patterns into the design of a space in one of two ways: The most obvious is to select and specify a premade pattern such as a textile, wallpaper, carpet, and so forth. The other is to custom-design a surface by laying out a pattern that is implemented in the installation of the material.

Pattern on a Floor



Hacin + Associates, Glass House Restaurant and Bar. Photo by Michael Stavaridis.

Pattern on a Wall



Studio Ramoprimo, BuonaBocca Bar. Photo by Cristiano Bianchi.

Chapter 13: Natural Light

Too often in interior practice, the quality of natural light is generally considered, but not fully integrated into the design concept. Yet to control, channel, and filter natural light as it enters a space can be one of the most effective of design strategies. Light can be a powerful component of an environment, given our innate tendency to react to qualities of light in emotional and intuitive ways: Designers know that orchestrating a sequence of spaces to end in a sun-filled room is sure to brighten the mood of the occupants. Moreover, in practical terms, studies have shown that natural lighting promotes productivity in the workplace and in academic environments. Beyond the poetic and functional benefits of working with natural light, a successful outcome requires its careful manipulation to avoid uncomfortable levels of brightness, glare, and heat gain.

ENVIRONMENTAL CONDITIONS

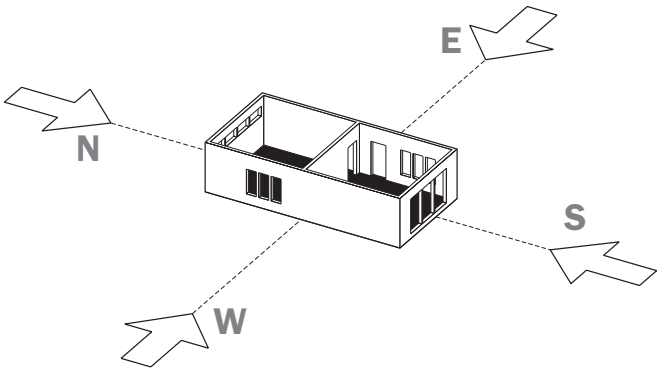
To design effectively with natural light, the designer needs to understand the *solar orientation* of each room and the configuration and characteristics of the exterior environment adjacent to each space. For example, a room whose windows face south may benefit from a well-placed tree that filters sunlight—especially a deciduous tree whose filtering properties change with the season. At the same time, a north-facing room may benefit from a wall or landscape element that receives strong light from the south that then enters the interior as beautiful bounced light.

SOLAR ORIENTATION AND FUNCTION

Anticipated activities in a space will determine how natural light should be controlled. South-facing rooms have the best orientation for most functions since they admit the most consistent sunlight throughout the day. By contrast, a room with north-facing windows allows only diffused light to enter, making it an ideal location for an artist's studio. For the same reason, a north-facing room is also best for computers since it minimizes the potential for glare on the monitor screens. If a computer room needs to face south, the designer will have to consider window treatments as a central part of the design concept.

Window openings that face west receive late afternoon sun at a very low angle, an ideal condition for a dining room and/or living room, but window treatments will be required to cut down on the glare caused by direct sunlight deeply penetrating the space. East-facing windows allow early morning sun to enter, which is ideal for a breakfast nook or the coffee station in an office environment. The orientation of openings in a bedroom should influence the selection of window treatments, especially for windows that look east.

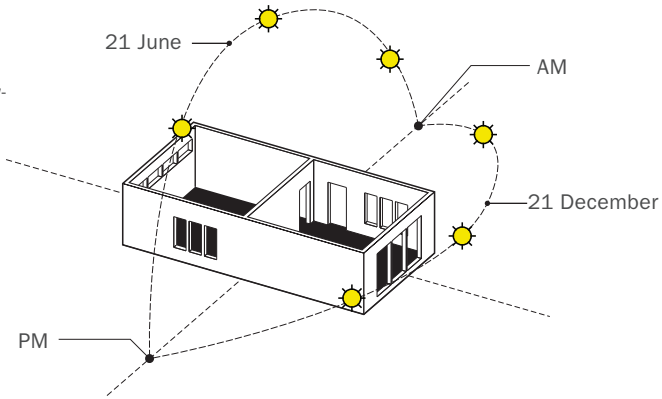
North: diffuse light
West: late afternoon sun
East: early morning sun
South: most consistent light



Seasonal Light

The altitude of the sun's path is constantly changing and is at its lowest angle in winter and its highest in summer. When the sun is low in the sky in winter, it allows more daylight and heat to penetrate a space, while the opposite is true in summer. Ideally, a designer should observe the changing daylight conditions of a space over the course of a year, paying close attention to the amount of light and shade in the morning, at noon, and in the afternoon, as the sun changes position in the sky from winter to summer. In lieu of direct observation, the effect of natural light based on the sun's movement can be predicted for any location and time of year.

The angle of the sun is always changing. Its highest angle is reached on 21 June and its lowest angle on 21 December.



CONFIGURING OPENINGS

The dimension and configuration of openings in the walls and ceiling will also determine the character of natural light in a space. Windows are the most conventional way to channel sunlight into a space. Their size and configuration can be shaped to create a desired effect. In addition to the light passing directly through the glass, bounced light from window sills and jambs contribute to the overall level and quality of light in a room. The contrast between window apertures and their surrounding surfaces must be carefully considered. For instance, a south-facing room with a few punched windows in a large expanse of wall will produce an unacceptable contrast; the same space with a large expanse of glass, on the other hand, will have more evenly distributed light.

Skylights are another way to channel natural light into a space. It is important to configure the ceiling plane and soffits to control the amount of direct sunlight that can penetrate a room since it can lead to unwanted heat gain and can fade rugs, upholstery, and artwork. The best top-lit spaces are those that rely on light bouncing from soffits and ceiling coves rather than those that allow a direct view of the sky.



Neues Museum, Berlin.

Natural light bounces around the curvature of the cove to create a luminous effect, accentuated by the metallic gold trim.

CONTROLLING LIGHT

Natural light can be controlled in three ways: through *additive treatments* such as blinds, curtains, and shades; by the *specification of the glass*; and through the *configuration of the opening* itself. New glass technologies such as fritting allow the glazing itself to function as a light-filtering system. Coatings for glass can also be specified that filter light entering a space and reduce ultraviolet rays in particular. The location and the design of the window aperture can dramatically affect light quality. Windows that meet the ceiling plane or the wall of the room will allow natural light to illuminate an entire surface, enhancing light levels and reducing contrast. The depth of the wall can also be manipulated by creating deep jambs and sills; an outside wall, for example, can be lined with bookcases. Often, the jambs of windows in this configuration are canted toward the interior, to maximize the amount of light that reflects deep into the room.

Window treatments are not the only solutions for controlling light. When views cannot be compromised with a window treatment, various glass types may be used to filter harmful ultraviolet rays.



Shelton Mindel Associates, Mindel Loft. Photo by Michael Moran. Photo: Michael Moran

SYNTHESIZING DESIGN ELEMENTS

Designing with natural light requires a careful synthesis with other design elements. Rooms that are prone to contrasts of light levels due to orientation and existing window apertures, for example, will need to be carefully balanced with artificial light. Color palettes should also be coordinated with the quality of natural light in a room. For rooms that benefit from direct and changing natural light, a more neutral palette may be more appropriate. Rooms that receive only northern or diffuse light may warrant more color. Vernacular architecture indicates such an approach: traditional Scandinavian architecture is richly colored, while the traditional houses of Greece and Spain are painted white.

Chapter 14: Artificial Light

Consider a strongly evocative interior space, one where the mood is immediately striking, and chances are high that lighting played a central role in its design. In a restaurant that is both cozy and contemporary, for instance, artificial lighting will inform the design features and the character of the space. Simple surfaces and colors will have been selected to take best advantage of the light: Walls might be a warm, buttery yellow, and mirrors and other reflective surfaces used to throw the focal glow of candles and soft light around the room.

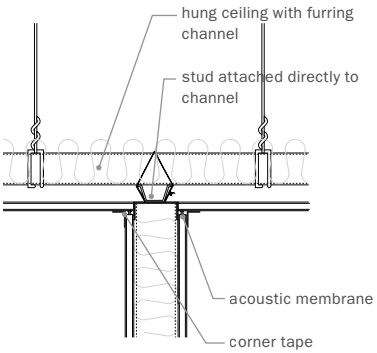
Lighting design that creates a mood is based on an approach that is at odds with lighting design that seeks evenly distributed and specific lighting levels. This kind of "perfect" all-over task lighting may be appropriate for flexible office space, but it fails to produce an imaginative setting for most other human activities. By understanding the specific tasks intended for a space, however, the designer can readily determine the appropriate lighting strategies that will integrate function and inspiration into a design.



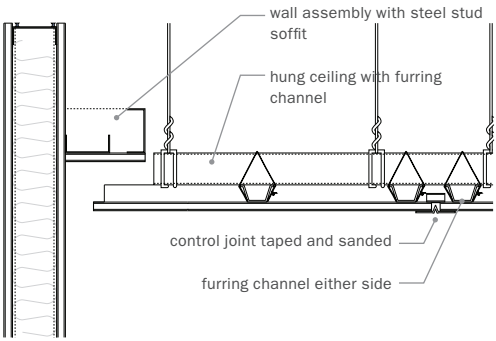
Aral Jackson Ellison Murakami, Veil Resaurant, Seattle; Studio Lumen, lighting design. Photo by Richard Spry.

CEILINGS

Ceiling Assemblies

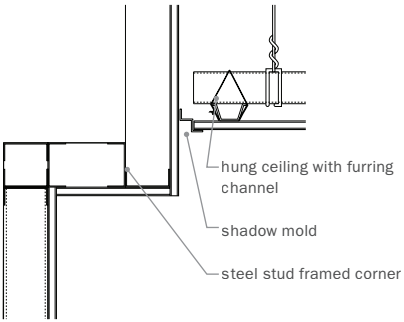


Wall to Underside of Ceiling

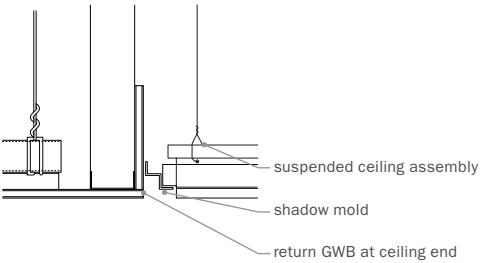


Return-Air Slot

Control Joint

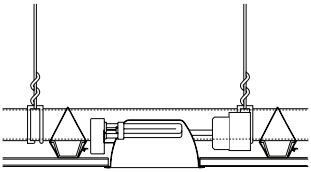


GWB Soffit

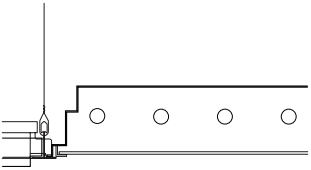


GWB to Suspended Ceiling

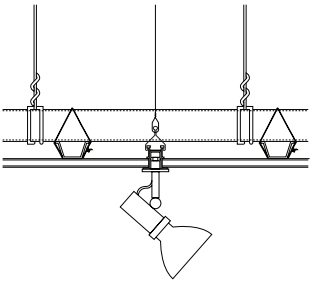
Lights at Ceilings



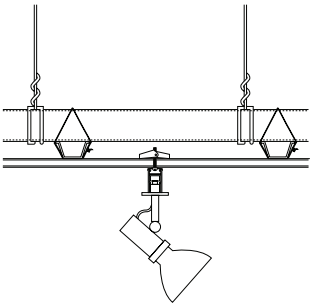
Compact Recessed Fixture



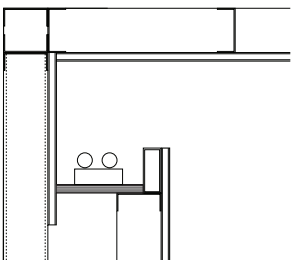
Fluorescent Fixture



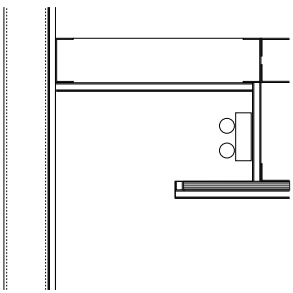
Recessed Track Lighting



Surface Track Lighting



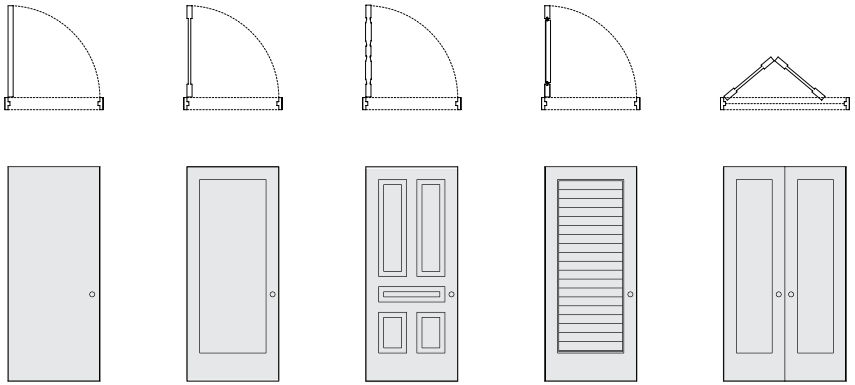
Cove Uplighting



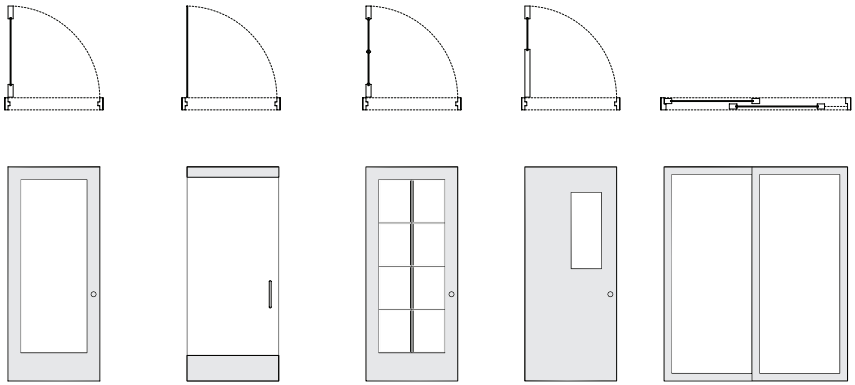
Cove Accent Lighting

DOORS AND HARDWARE

Door Types

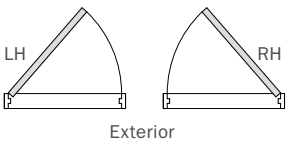


Flush | Panel | 5-Panel | Louver | Bi-Fold

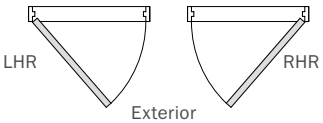


Full Glass | All Glass | French | Narrow Lite | Sliding

Door Handing



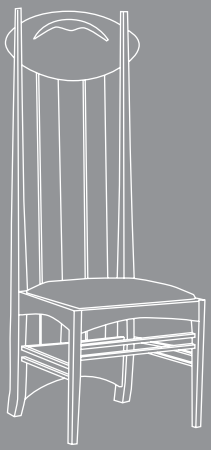
Left-Hand and Right-Hand



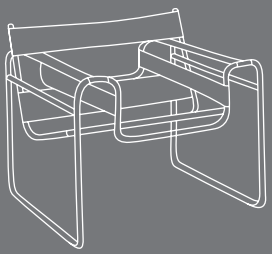
Left-Hand Reverse and Right-Hand Reverse

Chapter 17: Furniture

Knowledge of furniture and the role it has played historically in the development of the interior design profession is an integral part of the designer's toolkit. While the following pages illustrate canonic furniture that is decidedly modernist, they offer a good foundation for further research and exploration.



Charles Rennie Mackintosh
Tea Room Chair
1897

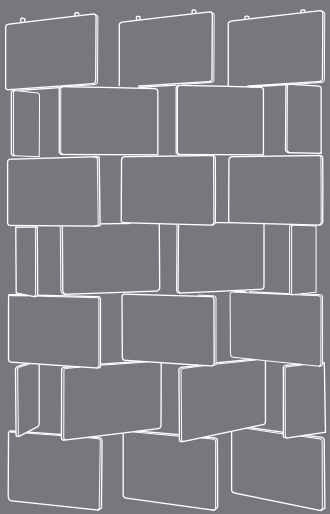


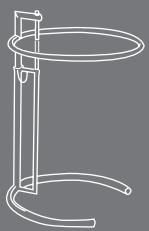


Thonet
Model 14 Chair
1859

Josef Hoffmann
Fledermaus Chair
1897



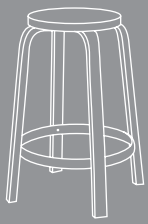




Eileen Gray
Screen
1925
Side Table
1929

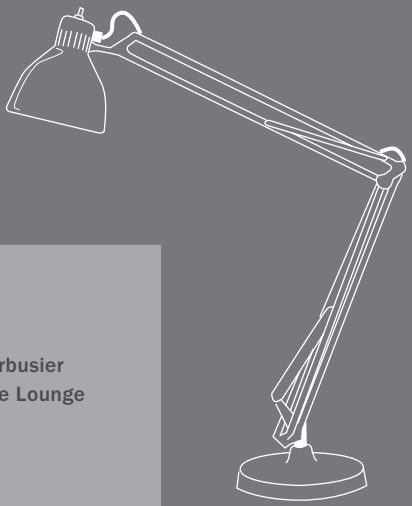


Alvar Aalto
Chair
1933
Stool
1932



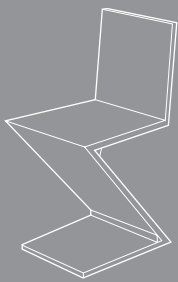
Marcel Breuer
Wassily Chair
1927

Jacob Jacobsen
Luxo Lamp
1937





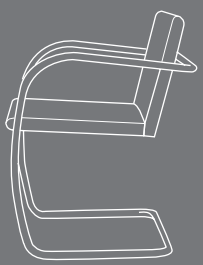
Le Corbusier
Chaise Lounge
1928



Gerrit Thomas
Rietveld
ZigZag Chair
1934



Mies van der Rohe
BRNO Chair
1930
Barcelona Chair
1931





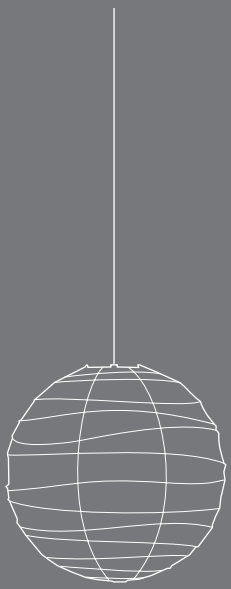
Charles and Ray Eames
LCW Chair
1946



Eero Saarinen
Womb Chair
1948



Arne Jacobsen
Series 7
1955





Jean Prouvé
Antony Chair
1950

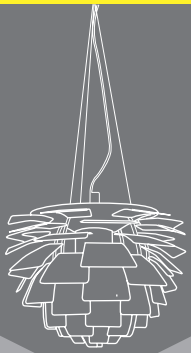


Raymond Loewy
Pencil Sharpener
1953

Isamu Noguchi
AKARI Lamp
1951



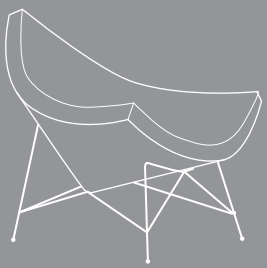
Poul Kjærholm
PK22
1955



Poul Henningsen
PH Artichoke
1957



Verner Panton
Chair
1959



George Nelson
Coconut Chair
1955

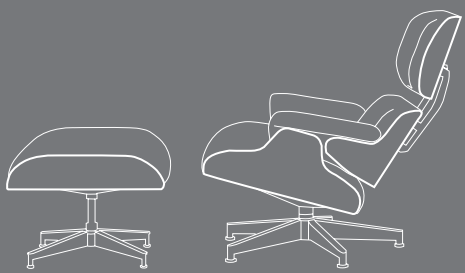
Hans Wegner
CH 07
1963





Arne Jacobsen
Swan Chair
1958

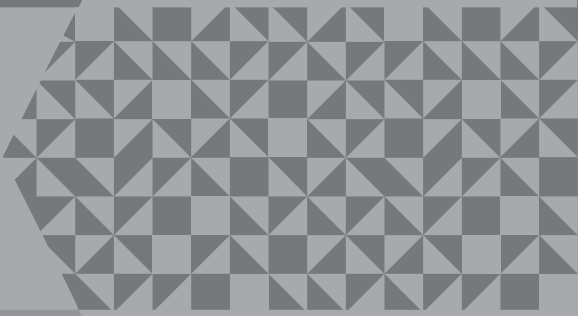
Charles and
Ray Eames
Lounge Chair
& Ottoman
1956

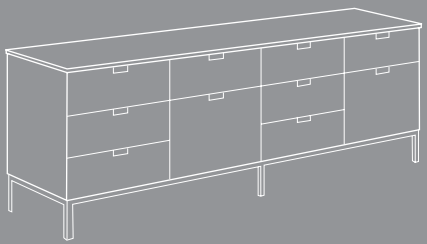




Achille Castiglioni
ARCO Lamp
1962

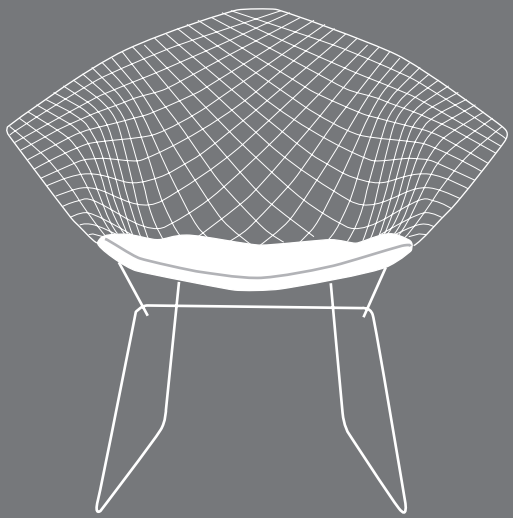
Alexander Girard
Checker Split
1965





Florence Knoll
Credenza
1961





Harry Bertoia
Diamond Lounge
1955

Michele De Lucchi
Side Table
1983

FUNCTIONAL ACCESSORIES

Functional accessories comprise items that serve a need of the occupant of the space and range from bathroom towels to wastepaper baskets to television sets. Functional accessories can have aesthetic value, which a good designer can incorporate into the design of an interior. Kitchen pots and pans, for instance, can be transformed into accessories if they are displayed on an overhead rack or on custom-designed shelves. The designer has made a conscious decision to treat the pots as objects worthy of contributing to the overall composition. This choice could be inspired by the clients' desire to communicate their love of cooking as much as the wish to add character to the kitchen through small-scale objects. Books are another example of an everyday object that can be elevated to the role of an accessory, either collected on open shelves lining a library or as a single volume displayed among objects on a coffee table.

DECORATIVE ACCESSORIES

Decorative accessories include collections of objects, memorabilia, family photographs, cut flowers, and plants. Accessories of this type can serve a purely aesthetic role or can function as a personal expression of the owners' interests and passions. This category of accessories is best grouped and composed with an eye to larger compositional issues of scale and balance.

A collage of different types of objects can be equally effective as a collection of similar objects. More important is the contrast between surfaces where collections are displayed and surfaces that remain unadorned.



Machado and Silvetti, Boston Townhouse. Photo by Stephen Lee.

ARTWORK

Larger works of art with high value, aesthetic merit, and/or deep personal meaning are typically displayed as focal points in a room and sometimes might drive other aspects of the design. Lesser artwork is typically displayed in compositions—whether as a still-life arrangement on a table or in a mosaic of pictures on a wall. In this case, the artfulness of the combination can create its own aesthetic pleasure. Pictures can be hung directly on a wall with a picture hook; or, to allow for a changing display, a picture rail or shallow ledge can be incorporated in the room's design. Tackable wall surfaces might also be considered for displaying more informal graphic ephemera and children's art. Similar in spirit are chalkboard or dry-erase whiteboard surfaces to encourage spontaneous self-expression.



Frawley Apartment. Photo by Michael Moran.

A composition of drawings and paintings on a wall provides visual interest and takes the pressure off an individual work of art.

PLACES FOR DISPLAY

Since accessories and most works of art are relatively small elements within an environment, they tend to be grounded in larger arrangements of objects and in specific places. An assemblage of objects or pictures can create its own visual identity by virtue of the cohesion resulting from the close adjacency and similarities or differences among objects. There are two common strategies of arrangement. Collections are displays of like objects, such as antique mechanical toys, arrowheads, or prints of natural history phenomena. Still lifes are displays organized purely for aesthetic effect, typically through the juxtaposition of disparate objects that share one or several attributes. For example, a still life might combine green objects, but with a range of textures from rough to shiny and a range of proportions from tall to low and horizontal.

Both collections and still lifes require a setting for display. Cabinets with open shelves, floating shelves on walls, fireplace mantles, and built-in niches are all examples of surfaces specifically designed for the display of decorative objects. Side tables and coffee tables also accommodate displays, along with drinks and hors d'oeuvres or the daily newspaper.

MINIMAL VERSUS CLUTTERED

Tastes for the appropriate amount of accessories in a room can vary dramatically. Design aesthetics range from the starkly minimal, with a few carefully selected accessories, to the highly cluttered interiors of the Victorian era—as well as the Eames House in Southern California. The relative density of accessories can also create character across a sequence of spaces; for example, moving from austerity in formal spaces to coziness in more private rooms. In general, the most successful interiors avoid the conventionality of the middle ground, but aim rather toward a carefully edited minimalism or the excess of a thoughtful curator.



Photo by Eames Office LLC, courtesy of Tim Street-Porter.

Collections are never complete, they simply evolve, as seen in Charles and Ray Eames's home in Pacific Palisades.

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www.overunder.co

Mimi Love was born in Laredo, Texas. She received a professional degree in architecture from the University of Texas, Austin. She worked in the New York at Perkins & Will and later at Kohn, Pedersen & Fox on various building types that ranged from new construction to renovation projects. At Machado & Silvetti Associates she was the lead designer for the renovation of the J. Paul Getty Museum of Antiquities in Pacific Palisades, California. She was also the project coordinator for the renovation and expansion of the Bowdoin College Museum of Art. She is currently a principal at Utile, Inc., focusing on interior renovation projects. www.utiledesign.com

Newly updated and revised, *The Interior Design Reference and Specification Book* is an essential sourcebook for designers, students of design, and anyone undertaking an interior design project.

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