BATH DESIGN BASICS

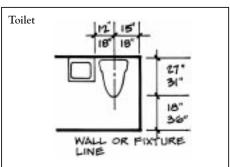
by Jerry Germer

Good bathroom design starts with laying out the fixtures for comfort and function

All bath planning starts with the fixtures — their features, sizes, and clearance requirements. The following sketches show several proven fixture layouts. The dimensions represent the minimum clearance for code or physical accessibility. Where two are given, the larger dimension yields a more comfortable space. You may want to provide even more clearance to suit your client's requirements.

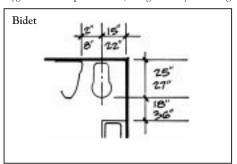
Toilets and Bidets

The size and shape of toilets hasn't changed much, but minimum clearances are crucial.



The only real improvement to the basic toilet in the last 50 years is the new generation of water saving toilets, which reduce the amount of flush water from seven gallons to as little as one.

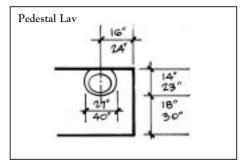
Bidets, long in use in Europe for personal hygiene of the pelvic area, are gradually catching



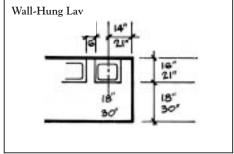
on in the U.S. Since hookups and clearances are similar to those of toilets, these fixtures are often placed side by side.

Lavs

Lavatories are currently available in four main types: pedestal, wall-hung, countertop, and integral. Pedestal lavs, popular in the early decades of this century, are making a comeback, but their higher cost and space requirements limit them



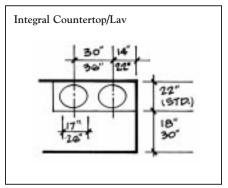
mostly to upscale baths. Wall-hung units come with or without a backsplash. Supply and waste piping is exposed.



Some countertop units are joined to the counter surface by a metal flashing strip (*mounting frame*); others have an edge that overlaps the counter surface (*self-rimming*). Lavs that fit under

the counter surface (under-counter) work only if the countertop is designed to allow water to run off the edge, as with cultured stone, synthetic solids (e.g., Corian, Nevamar), stone, or tile.

Integral lavs unite countertops and lavs in a single unit. Some resemble wall-hung lavs, but sit atop a cabinet base. Composite plastic models contain one or more lavs molded into countertop lengths of up to ten feet. (You'll have to

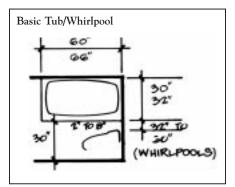


order anything over four feet custom-made.)

If you provide side-by-side lavs, remember that the goal is for two people to be able to use them at the same time. Aim for the more comfortable, on-center dimension of 36 inches.

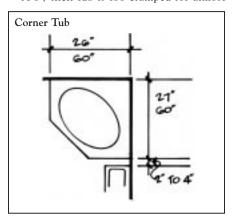
Tubs

Sometime early in this century, the 30x60 rectangular tub edged out the classic clawfoot tub, and still reigns as the most common fixture for bathing. Available in various materials and colors, it comes as tub-only or as a complete enclosure, with 1- to 3-piece wall surrounds, and sometimes ceiling panels. While the standard 60-inch length suits most people,



a 66-inch unit offers much more comfort to tall people.

A 54-inch tub is too cramped for almost



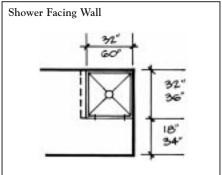
every adult. Square tubs fit neatly into corners and can be moved out into the room.

During the last decade, Americans began to think of bathtubs as more than just places to get clean. The change in attitude requires rethinking the layout. Instead of merely stashing the tub in the end of the bathroom, designers and builders now have to think of ways to enhance the whole bathing experience. Tubs can be pulled out into the room, recessed into the floor, elevated on platforms, and surrounded with plants. If space permits, separate the bath from the toilet.

Whirlpool baths are now preferred by a growing number of consumers. Sixty percent of remodeling jobs included whirlpool tubs, according to a 1986 survey by *Kitchen and Bath Design News*. Whirlpools start as small as a 32x60 tub and grow from there.

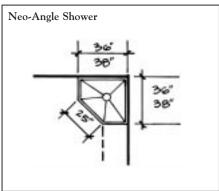
Showers

Showers combine easily with tubs when space is scarce, but separate showers are more in demand. Homeowners prefer showers when adding a fourth fixture to a three-fixture bath, and as the bathing fixture in second (three-quarter) baths. Another plus, showers are more accessible to older persons and the physically



handicapped because the curb is lower.

Showers can be completely site-built, site-built on prefab bases, or ordered as one-piece



molded units. They can open beside a wall, as above, or diagonally into the room (neo-angle).

Bath Layouts: General

When planning bath layouts, remember that the fixtures are only the tip of the iceberg. The unseen parts — water, waste, and vent piping systems — have to work without conflicting with each other or the building structure. While you can force the piping to fit almost any fixture placement, a little thought given to logical arrangements will save costs and headaches during installation.

Try to align baths above each other, floor to

floor, so that all fixtures can easily tie into a single waste/vent stack running up from the basement or crawlspace and out through the roof. Single-wall plumbing arrangements are somewhat more economical than those that require piping in two or three walls.

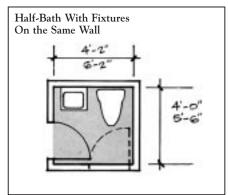
It's not always easy, but there are definite advantages to keeping waste/vent pipes out of exterior walls. For one thing, you won't have to worry about getting enough insulation between the pipe and outer wall sheathing (even in a 2x6 wall, you can only get 1½ inches of insulation behind a 4-inch pipe). And you won't be stuck with a fat, ugly vent pipe poking through the roof just above the eaves line or gable wall.

Unless the room is planned for wheelchair access (as discussed later on), I have found no advantage to a door wider than 28 inches. A larger door can be downright awkward in a small room.

Windows are always desirable in baths for light, view, and ventilation. Small windows placed high on the wall offer the most privacy. If you want a window above a toilet, you will have to offset the stack. Some designers avoid placing windows above tubs because of the likelihood of people slipping when reaching to open or close them.

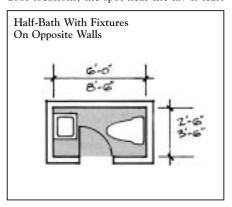
Half-Baths

Every home needs at least one full bath, but when you add a second or third bathroom, half-baths can save space and money. Because people use lavs and toilets much more often



than tubs and showers, half-baths are particularly well-suited to the public part of the house (kitchen/living/dining).

The simplest half-bath aligns the two fixtures on the same wall. Of the three possible door locations, the spot near the lav is least



awkward, and eliminates the direct view of the toilet when the door is left open.

If the space is long and narrow, such as

under a stairway, you can fit in a half-bath by installing the fixtures on opposite walls. But beware of positioning the toilet where it can't be vented. In most cases you can probably offset the piping to an adjacent sidewall.

Three-Quarter Baths

Three-quarter baths (lav/toilet/shower) make good sense when adding baths to the private (bedroom) part of the house, because showering saves more water and time than bathing, and showers are specifically suited to the task. They also save space, even though the overall room width and depth are about the same as with full baths. In single-wall plumbing arrangements (right) you might use the extra space for a needed mechanical chase or towel cabinet.

In my view, you get a better layout by spreading the plumbing over two adjacent walls (far right). The little corner space can serve as a storage closet facing into the bath or out into a hallway. Use the wall between the shower and toilet for a window above a towel rack.

Full Baths

The 5x7, three-fixture, full bath (actually 5'-0" x 7'-2"), plumbed in a line off one wall, is probably the most common bath plan in houses built since World War II (A, right). Fixtures can be arranged as lav/toilet/tub or as toilet/lav/tub, depending on where you want to locate the door. A door near a lav is probably less awkward than a door near a toilet. Free space for toweling off and moving around is minimal, and the only likely locations for a window are above the tub or toilet — less than ideal placements.

Adding 16 inches to the length of the 5x7 bath and widening the room by 6 inches yields a little more space to move around in and opens up a few fixture alternatives (B). For example, we could upgrade the tub to a 66-inch unit, replace a minimal lav with a 3-footwide vanity cabinet, and still have room for a linen or towel cabinet in the corner of the room.

Widening the room a bit more, to 7'-4", allows you to split the fixtures onto opposite walls for a more generous bath (C). A two-lav vanity backs up nicely to one wall, with a corner niche for the toilet. The opposite wall can accommodate a 60- or 66-inch tub, with space left over for a cabinet or alternate door. The end wall is a convenient location for a window above a towel rack.

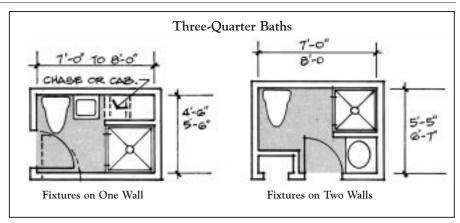
Four- and Five-Fixture Baths

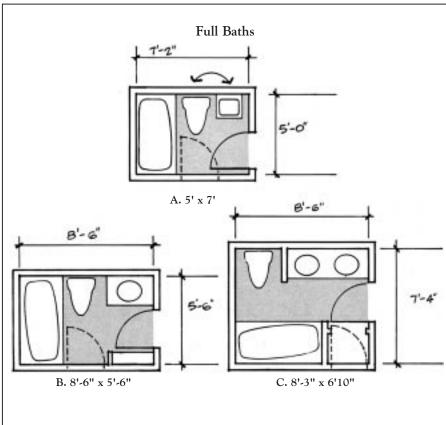
Baths larger than the traditional 5x7 not only afford more circulation space, but also give you more leeway to customize the layout to suit your client's needs.

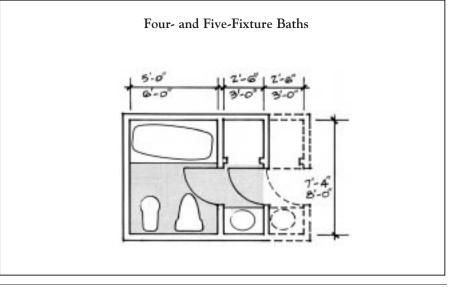
You might include a second lav, a bidet, or a separation between the lav area and the bathing and toilet area. As the space increases, so do the planning possibilities.

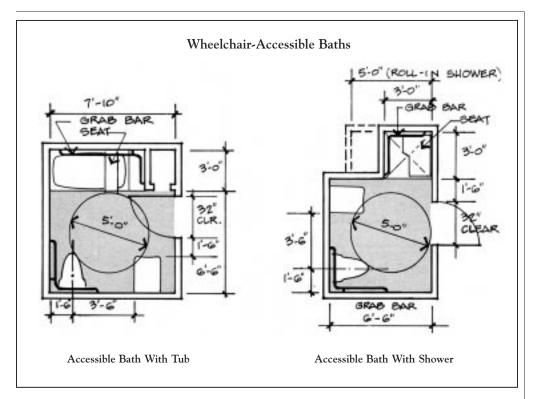
Wheelchair-Accessible Baths

The growing percentage of older people has created a need for more baths accessible to persons in wheelchairs. Doors should be at least 32 inches wide (minimum clearance between stops) and have at least 60 inches in front of the in-swinging side. In the bathroom itself, an unobstructed circle 60 inches in diameter is the minimum required area for









turning around in a wheelchair.

Mounting heights for wall fixtures and mirrors are lower than usual. Grab bars should be mounted at the rear and sides of toilets, tubs, and showers. Fixtures for bathing can be as simple as a standard tub fitted with grab bars and a seat.

If the handicapped person can

leave the wheelchair, a small shower (36 inches wide) containing a seat and grab bars may suffice. For people who can't leave the wheelchair, the shower stall has to be big enough (60 inches wide) for the chair to roll into.

The one-size-fits-all solution to bath planning no longer fits today's households of smaller fam-

ilies, working parents, and fewer children who stay at home. Your clients will appreciate the care you take to tailor their baths to their specific needs.

Jerry Germer is an architect and writer in Marlborough, N.H.