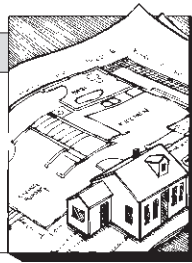


Common Floor-Plan Flaws

by Gordon Tully



Let's run quickly through some common floor plan errors, in order to get to more subtle design issues.

Direct Entrances Into Main Rooms

This is never done in polite circles. Some kind of defined entry, if not a separate vestibule, is an absolutely essential element in a good house plan.

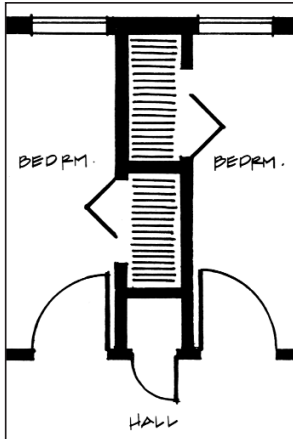


Figure 1. To avoid colliding doors at the entrance to paired bedrooms, consider using bi-fold or sliding doors.

Improperly Placed Doors

You can't design a room without considering where the furniture goes—real furniture, not the scaled-down stuff they draw in real estate brochures. With the furniture drawn in (try two or three different possibilities), you will quickly see where doors can and cannot be placed. Also, consider door swings; colliding doors are a nuisance that can usually be avoided (see Figure 1).

Plumbing Over Living Areas

Bathrooms, kitchens, and laundries are floods waiting to happen. If you locate them over living areas, you will sooner or later end up with sewage or washwater spilling on damask cushions and staining ceilings. Zone the plan so that plumbed spaces do not occur over living areas.

This does not mean stacking the toilets. Except in very low budget work, rigidly stacking plumbing puts you in a planning strait-jacket without saving much money. Locate wet areas over other wet areas, closets, halls, entries, and utility spaces whenever possible; and over bedrooms and family rooms only when unavoidable.

The above errors can be avoided simply by drawing better plans. To deal with the next issue you must also draw cross-sections.

Impossible Stairs

How do you tell an amateur from a professional architect? The professional draws an unbuildable stair after hours of thoughtful analysis, while the amateur does it right away, without wasting valuable time thinking about it.

Here are some of the stair planning

errors I often encounter:

- Drawing rises, runs, and widths not allowed by code.
- Leaving headroom below code minimum, especially at landings and under winders.
- Showing the same run of a stair running in different directions on alternate floors. It is a pity this is not possible, since doing this often simplifies a floor plan. (The famous artist, Escher, made it work, but only on paper.)
- Not leaving enough room to frame in a graceful (or structurally sound) railing.
- Pushing the basement stair too far under the next run up, cutting headroom below minimum.
- Not leaving room for a door to clear the stair ceiling, and not leaving legal landings on basement stairs.
- Omitting the stair altogether, a surprisingly common mistake, and one not easily fixed, especially once it gets to the field.

All of the above problems are really practical matters that can be avoided mainly through awareness. The rest of the plan errors I want to discuss involve more subtle design issues.

Not Enough "Wasted" Space

One of the quickest ways to end a conversation with an architect is to complain about wasted space, since most of the beautiful and important spaces in the world come under this definition—those with high ceilings and those used for circulation.

To the critic with the uneducated eye, a house should be made of adjoining rooms with low ceilings and no connecting hallways, on the model of a 17th-century American farmhouse, where three or four rooms surround a single hearth. Such a plan provides no acoustical, visual, or thermal zoning and requires every room to function as the route to every other room. Today we need a different sort of plan, with defined circulation passages and acoustic separation between zones.

In the interest of minimizing "wasted space," the passages and stairs of most small houses are as small and plain as possible, carved reluctantly out of a rigid pattern of rooms. In a typical ranch, such as the one shown in Figure 2a (facing page), all the circulation to three bedrooms and two baths is confined to an unlit tunnel so many feet

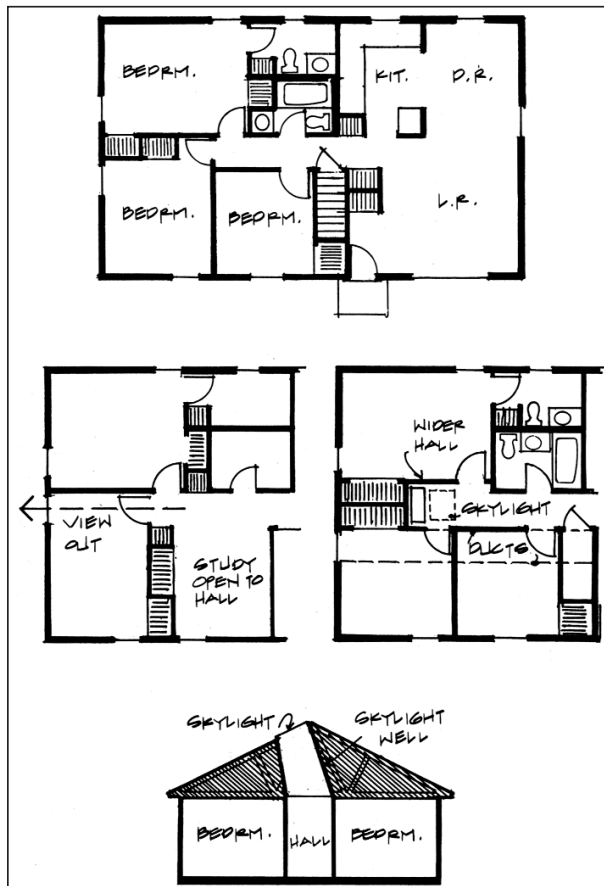


Figure 2. This low-cost, three-bedroom ranch house (a) demonstrates two common floorplan errors: an entry directly into the living room and a dismal bedroom hall.

Solutions: Turn one bedroom into an open study and rearrange the closets for a window at the end of the hallway (b). Or put a skylight over the hall with hvac ducts rerouted, and rearrange closets for a wider hall (c and d).

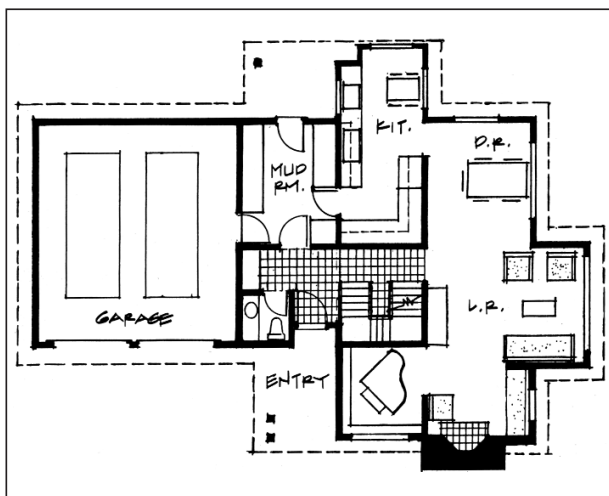


Figure 3. This larger plan (1,100 square feet on the first floor) shows how a living room can be made more interesting by providing separate spaces for different functions: a piano alcove (it could be a TV room), an "inglenook" at the fireplace, and a bay window seating group. Note the convenient entry arrangement.

long by 3 feet wide. This corridor is a perfect example of what I would call truly wasted space, since it serves only one function and is devoid of architectural interest.

There are several ways to improve such a space, some requiring only a modest added investment, if you catch it before it's built. One no-cost improvement is to line up a door and a window with the end of the corridor, so that when the door is open the corridor extends through the end room to the outdoors (Figure 2b, facing page).

Another is to cut in a skylight, which requires heading off one or two trusses or rafters to create a sizable gypsum board well up through the attic to the roof. The ductwork which often occurs over the corridor can be shifted to the side and run in a dropped ceiling over the adjacent bedrooms, thereby enlivening those spaces as well (see Figure 2c).

In plan, the corridor can be widened at the end into a square space, perhaps large enough to include a piece of furniture. If this space is topped with a skylight, it will function as the focus of the bedroom wing (Figure 2d).

To the uneducated eye, a house is made of adjoining rooms with low ceilings and no connecting hallways. Such a plan provides no acoustical, visual, or thermal zoning. Today we need a plan with defined circulation passages and acoustic separations.

Many households need only one or two bedrooms, and use the extra bedroom as a study. If privacy is not crucial, this space can be opened to the corridor, or separated from it by a fixed or moveable screen, visually expanding both spaces.

In a good plan, the hall and corridors are the most useful spaces in the house—places which have functions other than simply linking rooms.

Oversized Rooms

Many amateur designers think that rooms must be as large as possible. This is a mistake. A room needs to be sized to suit its use. Big rooms often look pretentious, forlorn, and empty, especially if they are simple rectangular volumes.

A large room in a small house has to serve several functions. This forces the householder to create zones in a room which cannot be subdivided gracefully. In place of a large, rectangular living room, the designer should create separate spatial areas to suit each of these functions. Build a modest sitting space, perhaps with a raised ceiling, focussed around a stove, fireplace, or a view. Off this main space, add smaller alcove spaces for an eating table, a desk, a piano—whatever the client needs (see Figure 3, previous page).

Not only does this create intimacy and interest, it cuts down on the size of the house and adds more furnishable corners.

Two-Dimensional, One-Color Thinking

No matter how well thought-out your plan may be, it will result in yet another boring, boxy house unless you change the third dimension along with the plan. Stairways, lowered or raised ceilings, raised floors, light coves, skylights, double-height spaces—these are all tools for creating interesting spaces by using the vertical dimension you don't see in plan.

Rooms should not be thought of as boxes made of painted gypsum board. Use all the tools at your disposal to enliven the spaces: wood trim; varied colors and materials; lighting; built-in furniture and cabinetwork; space dividers and screens; window placement; exposed structures.

Good plans result from the simultaneous consideration of materials, lighting, and all three spatial dimensions. This is not a skill you learn overnight! Look around you; study good examples; and never draw a plan without drawing elevations and sections at the same time. ■

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