
Simple Drawing for Remodelers & Builders

by Carl Hagstrom

A little time invested in neat drawings
pays dividends in sales and job coordination



The old saying "a drawing is worth a thousand words" rings especially true on a building project. A drawing helps a homeowner envision the finished product far better than any written specifications or verbal description can. Presently a quality set of drawings also helps convince a prospective client that you are an organized and knowledgeable professional.

All builders recognize the need for blueprints for new homes. But it is just as import to provide accurate drawings for additions and remodeling jobs.

Drawings act as the coming attraction for your customers. They allow customers to mull over a proposed project and make any changes before the work begins. Thus, they help avoid the bane of the contractor's existence, the change order. Drawings also serve as a map for your crew and subcontractors, who will be less likely to get "lost" if they have an accurate set of drawings to follow.

Finally, if you wear the hats of both owner and lead carpenter (as I do), drawings let you concentrate on the task at hand; this leaves you relatively undistracted by design decisions and details. By settling these questions in advance and recording them with good drawings, you effectively eliminate those awkward and costly delays when your workers stand around as you try to remember what goes where.

What Drawings Do you Need... and Who Should Do Them?

While you seldom need a full-blown set of architectural prints on a small job, you should provide more than a scibbled sketch on the back of a cocktail napkin.

Perhaps the first question you should ask yourself before starting your drawings is, "Am I getting in over my head?" A poorly executed set of drawings does more harm than good. If you lack drawing experience, limit yourself to simple projects at first (such as an attic-to-bedroom conversion). If you're gutting a large portion of an existing home to install a new kitchen, two baths, and a sauna, perhaps you should have a kitchen and bath designer do the drawings. If your project requires "specialty design" (such as historical reproduction), consider an architect who specializes in that area. The point is to accurately assess your abilities and work within them. With experience you'll be able to handle more complex drawings.

A note on liability: While most contractors' liability insurance protects them from their own design errors, you should check with your insurance agent as to the extent of your coverage before you do your own drawings.

Preliminary Drawings

After you've met your client and have an idea of what he or she wants

and can afford, you should work up a set of preliminary drawings — a quick but neat floor plan to go with your proposed cost estimate. You need to include only the three basics: walls, windows, and doors. Don't risk spending hours on a detailed drawing that your client may reject in five minutes. At this state your role is more one of salesperson and designer than builder.

Your preliminary drawings should provide a simple and straightforward picture of the proposed project. Above all, avoid clutter. The first and most important person to look at your preliminary drawings will be a non-builder — the customer. Technical touches such as section and detail drawings are lost on the average homeowner.

For preliminary drawings, I prefer nonreproducible 1/4-inch graph paper (available in both tablets and 36-inch rolls). Everything drawn on this medium will photocopy clearly, but the grid of blue lines will not be reproduced.

Sketching the basics. Start by penciling in the walls, windows, and doors. On a remodeling job, draw the new walls, windows, and doors (as well as the ones you propose to leave) as solid lines. Draw what you plan to remove with dotted lines, and then add in any

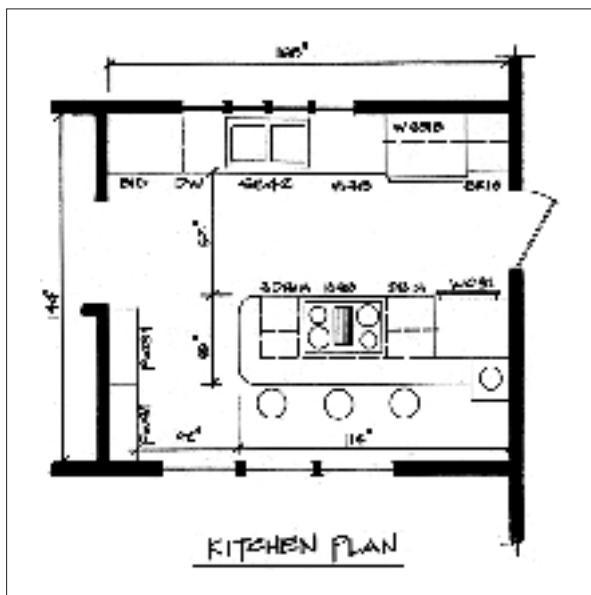


Figure 1. A separate drawing for kitchens, baths, or other details lets you include detail and product information that would crowd a general plan of the larger project.

key components, such as cabinets or plumbing fixtures.

Two narrow lines centered in the wall thickness work well for windows, while templates (available in 1/4-inch and 1/2-inch scales) provide the easiest way to draw doors. You can draw doors with a compass, but you'll get a more professional look using a template. Templates also give you cut-outs for tubs, toilets, sinks, and so forth, which look good and save you time.

Inking in. When you're happy with the accuracy and completeness of your drawing, you're ready to ink it in. You can make an efficient tool for inking in wall lines by trimming the end of a magic marker with your utility knife; this lets you use a straight edge to guide the barrel of the marker rather than the tip. I use a thinner felt tip pen to ink in the windows and doors.

When you're done inking, make your copies. For preliminary drawings, high-quality photocopies should be adequate.

Getting Serious: The Project Drawing

When you and your customer have revised the preliminary drawings and agreed on a design and cost, it's time to plan the project drawing. At this stage

I request a deposit. This not only compensates you for your time at the drawing board, but also helps determine how serious your client is. You can save yourself much wasted effort by requesting a deposit at this point.

Likewise, if you are performing any work that requires your drawings to be approved (for permits, for example), be sure to contact the appropriate officials before you start your drawings. Find out what they require and make sure you include it.

More than one? Depending on the job's size and complexity, you may want to make more than one project drawing. If your work involves a new kitchen or complicated bath, consider making separate drawings for those areas (see Figure 1). This will allow you to include details and notes (cabinet sizes, counter heights, etc.) that would otherwise crowd your general floor plan. If you decide to make separate kitchen or bath plans, be sure to briefly locate counters, appliances, tubs, toilets, and vanities on your general floor plan as well, so your customer can get a feel for how these items will relate to the overall project (see Figure 2).

I've found it wise to include any new wiring in the general floor plans as

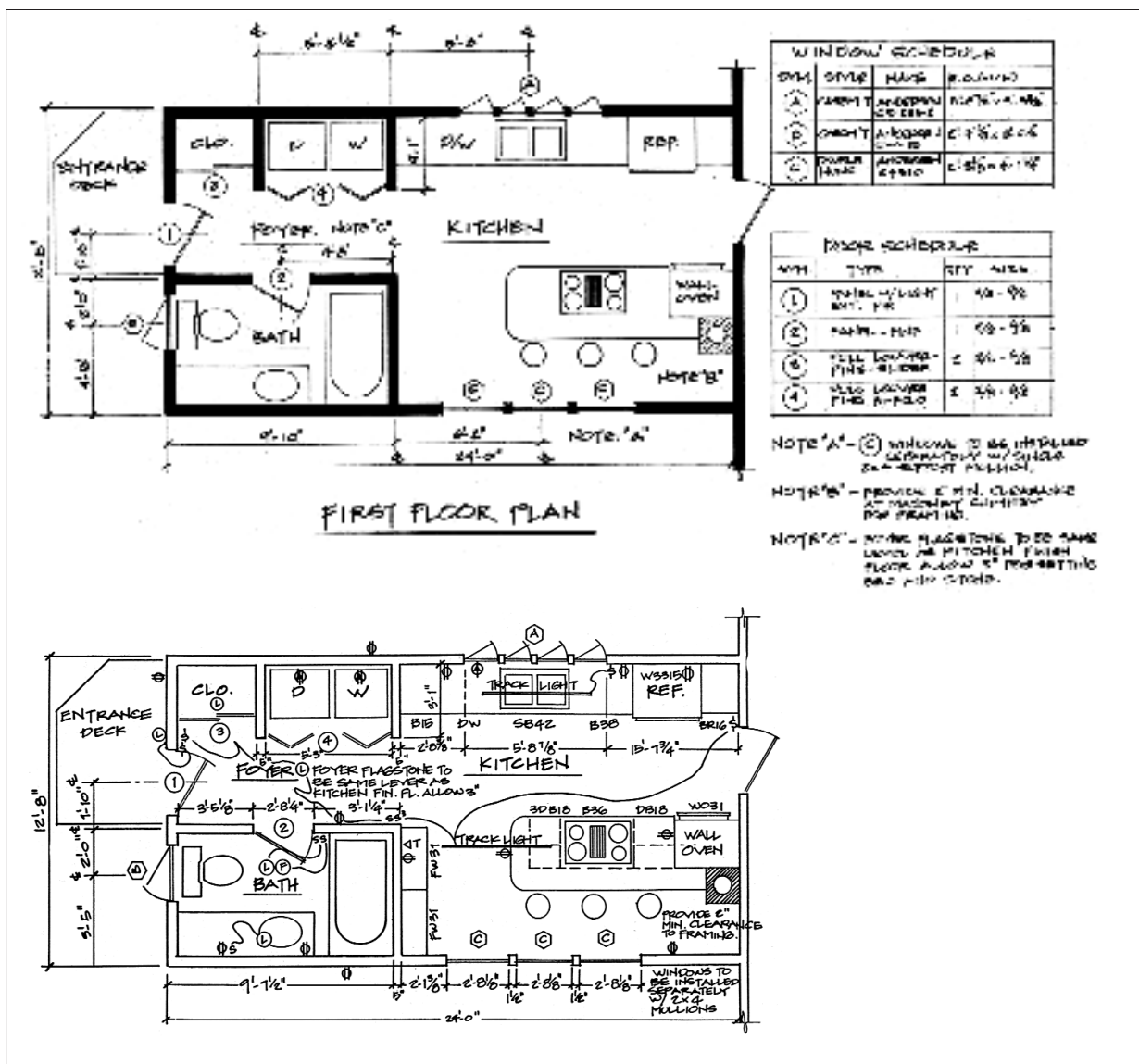


Figure 2. Two general floor plans: one neat, one cluttered. Putting detailed information in schedules and notes off to the side creates a clearer picture of the project (top). The cluttered approach (bottom) helps neither you nor your client.

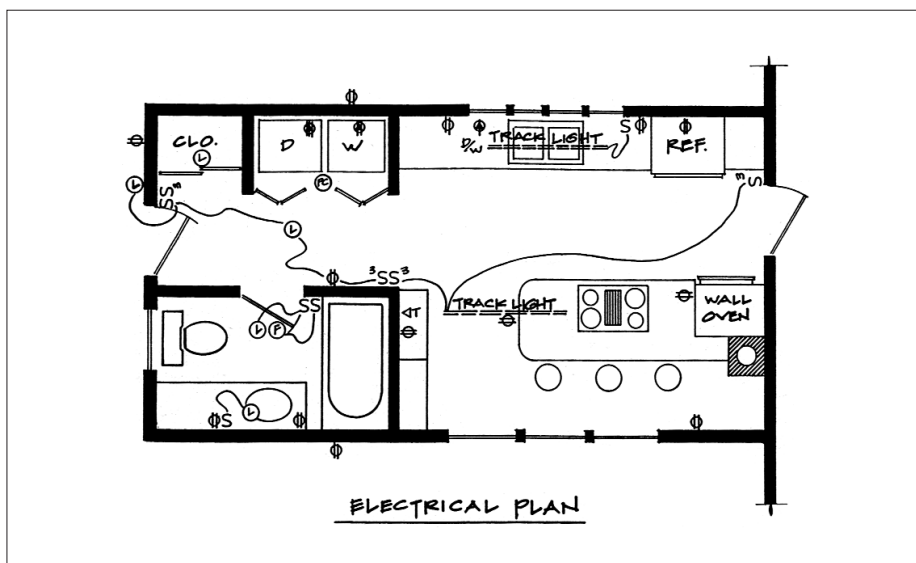


Figure 3. On jobs with complex wiring, a separate electrical drawing can help you walk your client and electrician through the project. This allows you to supply detailed information without cluttering the main drawing.

well. If there is a great deal of wiring to be run, or an addition with all new wiring, a separate electrical plan may make sense (see Figure 3). It will enable you to "walk" your customer through the print, pointing out lights and which switches turn them on and off (particularly helpful with three-ways.) It also reduces confusion for the electrician, helping to avoid such snafus as switch boxes being placed on the wrong side of rough door openings.

How many times have you seen a project through its completion without a single change occurring? It doesn't happen. Be sure to revise your drawings whenever change orders alter the design.

Materials. Project drawings require a higher-grade drawing medium than preliminary drawings do. If you only occasionally spend time at the drawing board, you'll need a drawing paper that erases easily, traces well, and prints economically. Good quality vellum, available at most art or drafting supply stores, satisfies all three of these requirements. I recommend the pre-sized sheets with a border and title block preprinted; the border and title block give the drawings an air of consistency and professionalism.

The best pencils I've found are mechanical pencils with a lead diameter of 0.9 mm and 2H lead. Rolling these thin-leaded pencils as you draw a line wears the lead evenly.

Getting down to work. Site the drawing on the paper carefully, leaving room for door and window schedules and other notations as shown on Figure 2. Don't crowd your drawings. If things start looking jammed-up, go to the next larger paper size or reduce your scale (1/4-inch to the foot is the smallest scale you should use).

When you are comfortable with the general layout, lightly pencil in your walls, windows, and doors. Layout your main dimension lines next, trying to keep them on the exterior side of the building. Dimensioning to the centerline of objects whenever possible will help reduce the amount of dimensioning notations and keep the drawing clean. Don't clutter it with a grid of lines locating the front doorbell.

When you're done with the main drawing, locate any "extras" that are to be included in the drawing and lightly pencil in your window, door, and note schedules. The door and window schedules should list style, size, rough opening, and manufacturer. These will give your lead carpenter and subcontractors a single source reference and help your customer see what goes where. A note schedule will let you include or describe items or construction details of importance without cluttering the drawing areas.

When all this is done, you should take a few minutes to review your drawing. When you're comfortable with its accuracy, darken it using a heavier HB lead. The heavier lead will produce lines that will copy well, and it also leaves you the option of making changes later without having to redraw the whole affair. Start at the top of the drawing, completing all horizontal lines as you move down the drawing with your straight edge. This reduces the chance of smearing your lines with friction from the straight edge. Likewise, proceed from right to left for your vertical lines (left to right if you are left-handed).

Complete your lettering and dimensioning figures last. Lettering can make or break your drawing, so use guidelines to keep your words level, and spend some time "warming up" before you start in with your lettering. Neatness counts.

Take your finished drawings to a printer who can make "blue line" prints (requiring a copier that uses anhydrous ammonia). If you're in a rural area, you might find a blue line machine at a surveyor's office. If the copies look good, prepare them with your cost information to present to the client.

Responding to Changes in Plan

How many of you have seen a project through its completion without a single change occurring? It doesn't happen. Be sure to revise your drawings whenever change orders alter the design. Often some careful erasure and redrawing on the original is all that's needed. Major changes can require retracing the original to include the changes. Always note in the title block that a revision was made and include the date. Give copies of the revised drawings to all concerned and remove outdated drawings from circulation.

The Dollars and Sense of Drawings

You may have difficulty justifying the time spent on good drawings. But if you build your reputation on quality workmanship and organization, quality drawings can only strengthen your position. My costs for planning (the client meetings, design, and drawings) range from 3% to 6% of the total project, depending on complexity. (Payment for planning and drawings should be treated as a deposit for the entire project, not as a separate design service.) This cost is more than offset by the advantages it offers the contractor and the homeowner: longer lead times for shopping and purchasing materials, fewer changes once the job starts, and fewer mistakes by your crew and subcontractors.

It also enables you to show your next prospective clients not only your last completed project, but copies of the drawings that lead to it. This will help give them confidence that you have the ability to transform abstract design ideas into a finished product.

It Beats Pulling Nails

Developing the skills necessary to produce quality drawings takes time. If you find it difficult to justify this time, consider the advantage of being able to correct a mistake quickly, with an eraser, instead of spending all day correcting it with a Sawzall and a cat's paw. ■

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