

Line

Lecture 4

Plan drawings are an organization of lines that create a legible document. Lines make up the house, property lines, symbols, textures, and labels. The line drawing should first and foremost read clearly and present little confusion. It is important that all details pertaining to material, installation, and layout can be easily read by the client or contractor. Second, the line drawing should be presentable. A clean, crisp drawing appears professional.

Line Quality

Consistency

For consistency, lines should be an equal width and value from the beginning of the line to the end (Figure 3-1) . These two qualities are affected by the following:

Speed of hand. The faster the drawing hand moves, the thinner and lighter the line appears (Figure 3-2) . If the speed of the hand varies on a long line, it will be inconsistent in width and value.

Drawing tip. The tip of pencils and some markers can become flattened on one side and create inconsistent line width.

Figure 3-1 Line Consistency Keep line width consistent from the beginning to the end of the line by keeping the lead sharp and rotating the pencil to avoid a flat side developing on the lead.

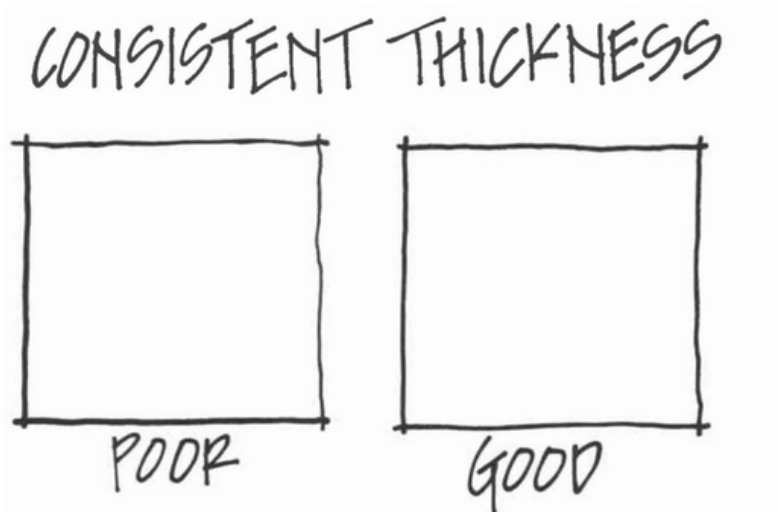




Figure 3-2 Speed of Hand As the drawing hand moves faster, the line becomes thinner and lighter.

Pencil

Sharpen lead often. Sharp lead creates lines that have crisp edges. When lead gets dull, line edges are vague, similar to a crayon.

Once sharpened, the tip of lead is brittle and can break easily. Slightly dull the tip on a piece of scratch paper or a sandpaper board to round the edges and knock down the tip. Sharpen lead frequently to keep line width consistent. Without frequent sharpening,

lines will begin thin and eventually widen as the tip wears down. Lead tips also begin to develop a flat side, which can disrupt line consistency. Rotate lead point by frequently by regripping and turning pencil.

Ink

Because the line width is based on the size of the ink tip, line quality is excellent. The line width remains consistent and solid from beginning to end as long as speed of hand is consistent. Disposable markers (pigment liners) that have a soft tip will develop a flat side if they are not sometime rotated while using. The steel tips of technical pens, however, will not flatten and maintain constant line width.

Solid Lines

Have confidence in your solid lines. Do not be nervous and end up with tentative lines (Figure 3-3) . Also, do not sketch a line with several short strokes. You will end up with poor-quality lines that appear sloppy.

For relatively short lines, draw with quick, crisp strokes. This creates a line with solid character. Focus on the beginning and end of the line to get straight lines that have the weight on the ends (Figure 3-4). For long lines, use a straightedge to create a solid, straight line.

Redrawing Lines?

Once a line is drawn, many students draw back over it in an attempt to improve the line quality. In most cases, this creates a double line: a darker line with the original line curving around it (Figure 3-5).



Figure 3-3 Line Quality
Keep lines solid and crisp.
Sketchy lines do not read well
on a plan drawing.

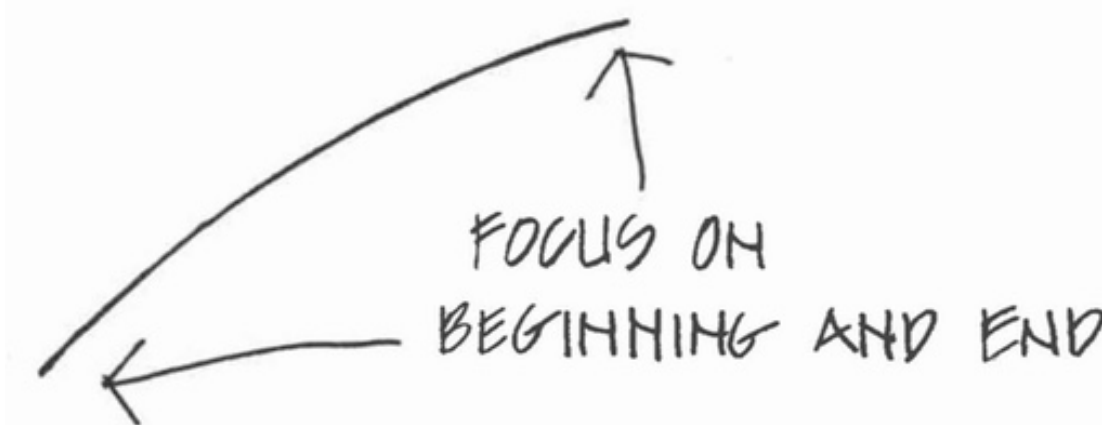


Figure 3-4 Line Emphasis For relatively short lines, focusing on the beginning and end of the line with a short stroke will help create a sharp line.

DONT TRACE OVER LINES

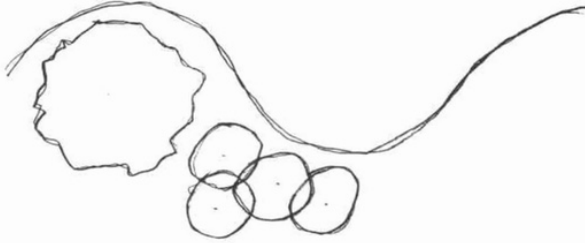


Figure 3-5 Tracing Lines Avoid tracing over lines to "improve" them. If the lines need to be redrawn, then erase the originals.

Straight Lines

Use a straightedge, such as a triangle or T-square, to draw straight lines (Figure 3-6). This is important for long lines, such as property lines or driveways. Either draw sharp, straight lines across the edge of the straightedge or use the straight-edge to draw a light guideline to trace over freehand. Long freehand lines can exhibit a nice, loose quality.

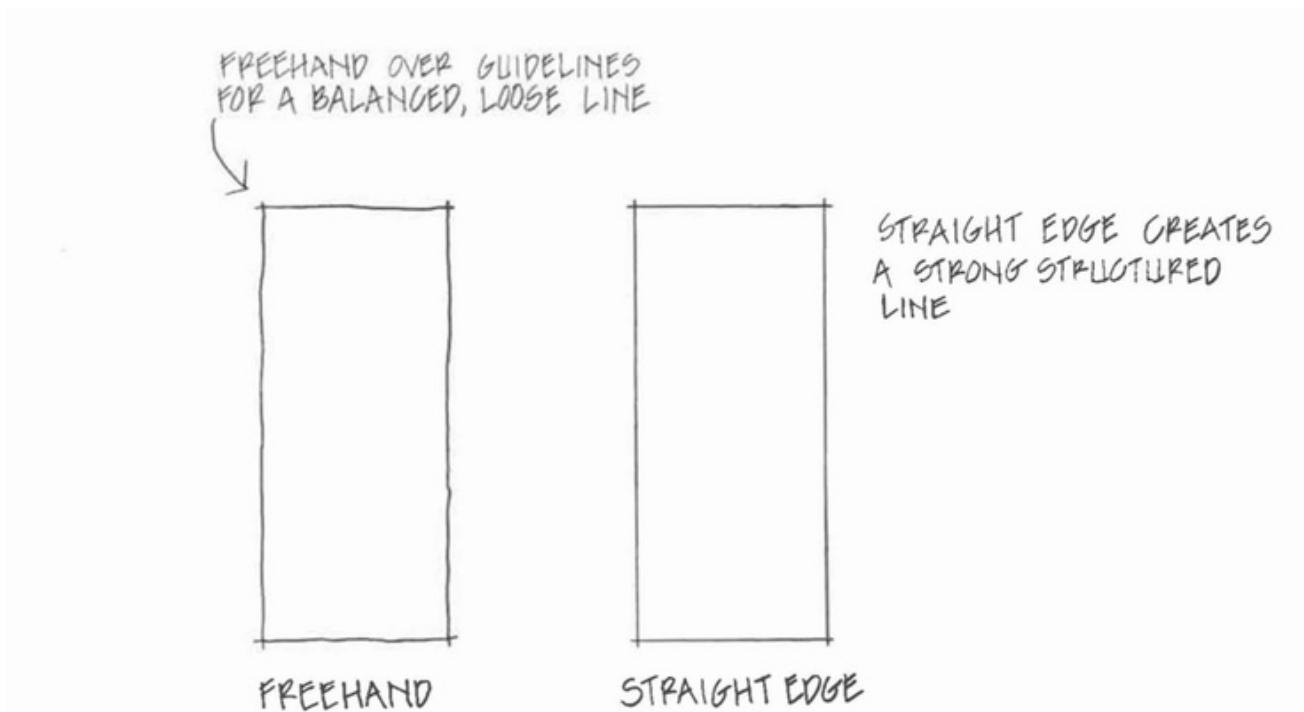


Figure 3-6 Straight Lines Straight lines can be drawn across a straightedge or over a guideline that is drawn with a straightedge.

Corners

Where corners are drawn, lines should meet in order to establish a well-defined, solid connection (Figure 3-7). The lines can even slightly cross over, emphasizing the object and lending a loose quality. Do not overly cross corners and make them confusing or distracting.

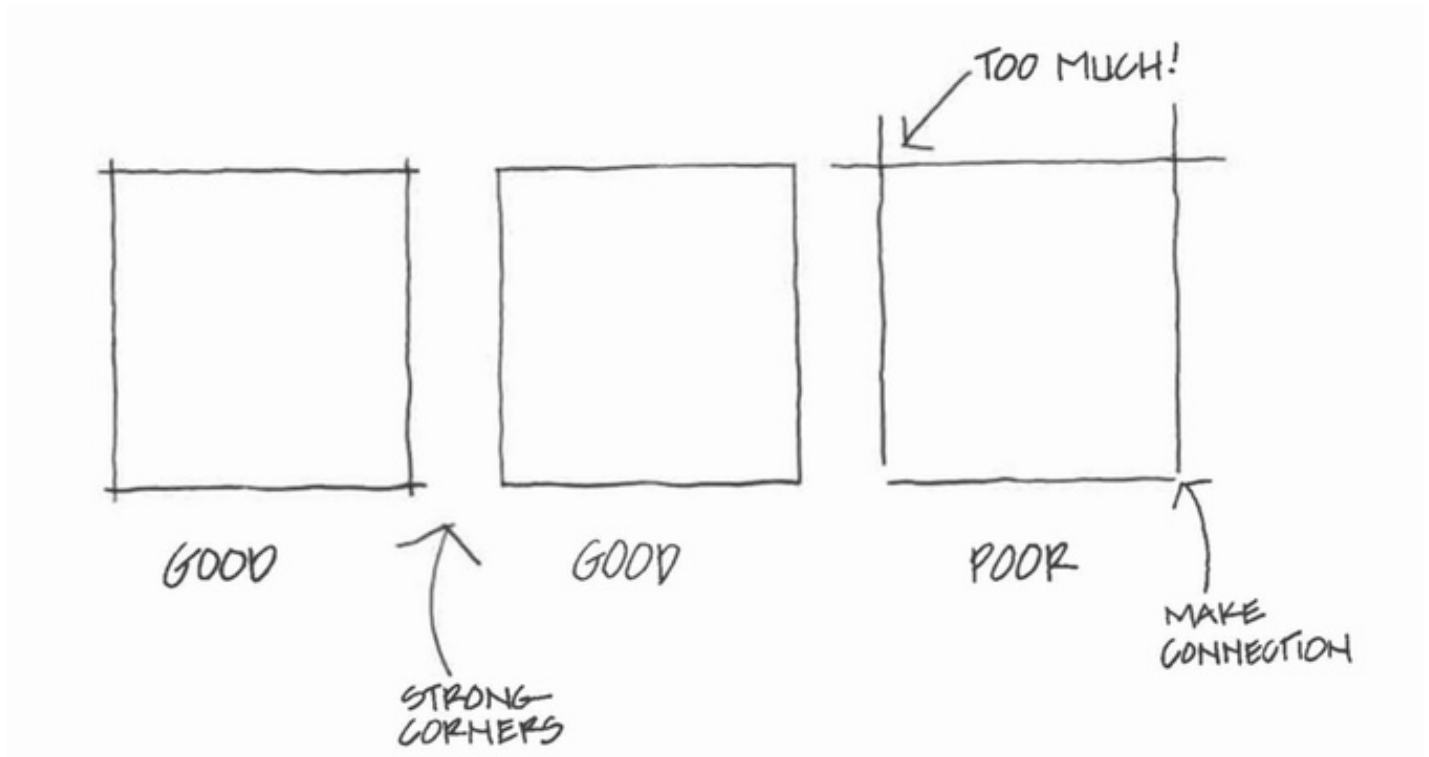


Figure 3-7 Corners Where lines meet to form a corner, they should always make the connection or slightly cross over.

Smudging

Smudging takes the crisp quality from lines. Lines can be ruined from your drawing hand and equipment being dragged across them. Lead lines tend to smudge as they are continually drawn over, with softer leads being more susceptible. Over time, the drawing will develop a gray haze, reducing the contrast between lines and white space as well as looking sloppy. Smudging lead can be avoided with a few simple techniques (Figure 3-8).

Scratch paper. Place a small piece of paper (or triangle or cloth) under your hand when drawing. This will prevent your hand from dragging on the paper as well as keeping the paper moisture-free.

Dry cleaning pad. Lightly dust the paper before drawing; the eraser crumbs will reduce smudging (be careful of bits that negatively affect the print quality) .

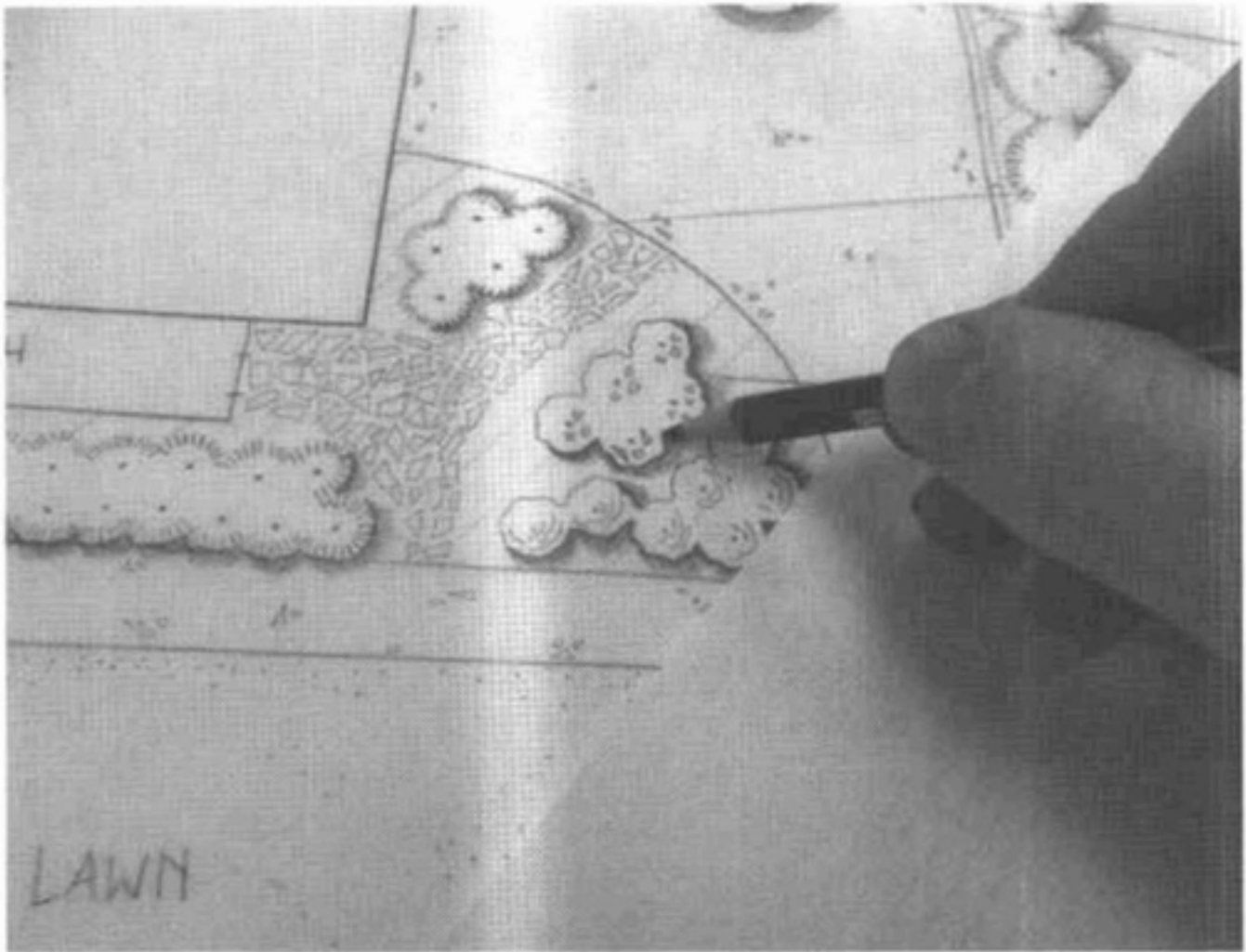


Figure 3·8 Prevent Smudging Keep lines from smudging by dusting the paper before drawing and placing your drawing hand on a piece of paper.

When using ink on a straightedge, such as a triangle, there is a tendency for the ink to bleed under the edge and smear when the triangle is lifted off the paper. Be sure you are using an ink triangle that has a beveled edge (Figure 3-9). The marker will run across the edge that is off the paper and prevent it from bleeding under.

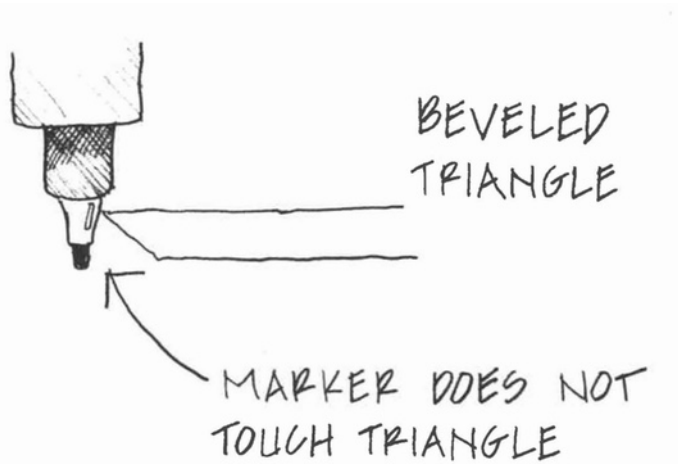
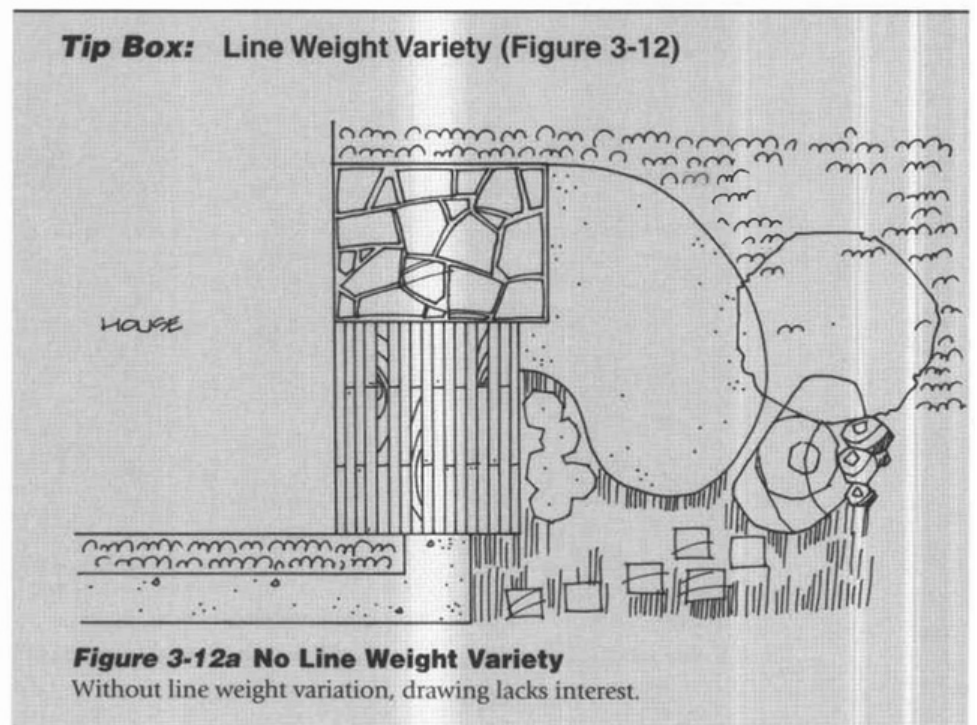


Figure 3-9 Ink Triangle When using ink, the straightedge has to be elevated off the paper to avoid the ink from bleeding under the edge.

Line Weight

The width and darkness of a line define line weight (Figure 3-11). The more weight a line has, the higher degree of presence it exhibits. Heavyweight lines are dark and thick. A softer lead (B lead) will draw darker and wider lines. With ink, a wider line is achieved with larger tips, since the darkness of lines does not change. Lightweight lines are lighter and thinner. Use harder leads (H leads) and smaller ink tips to get lighter weights.



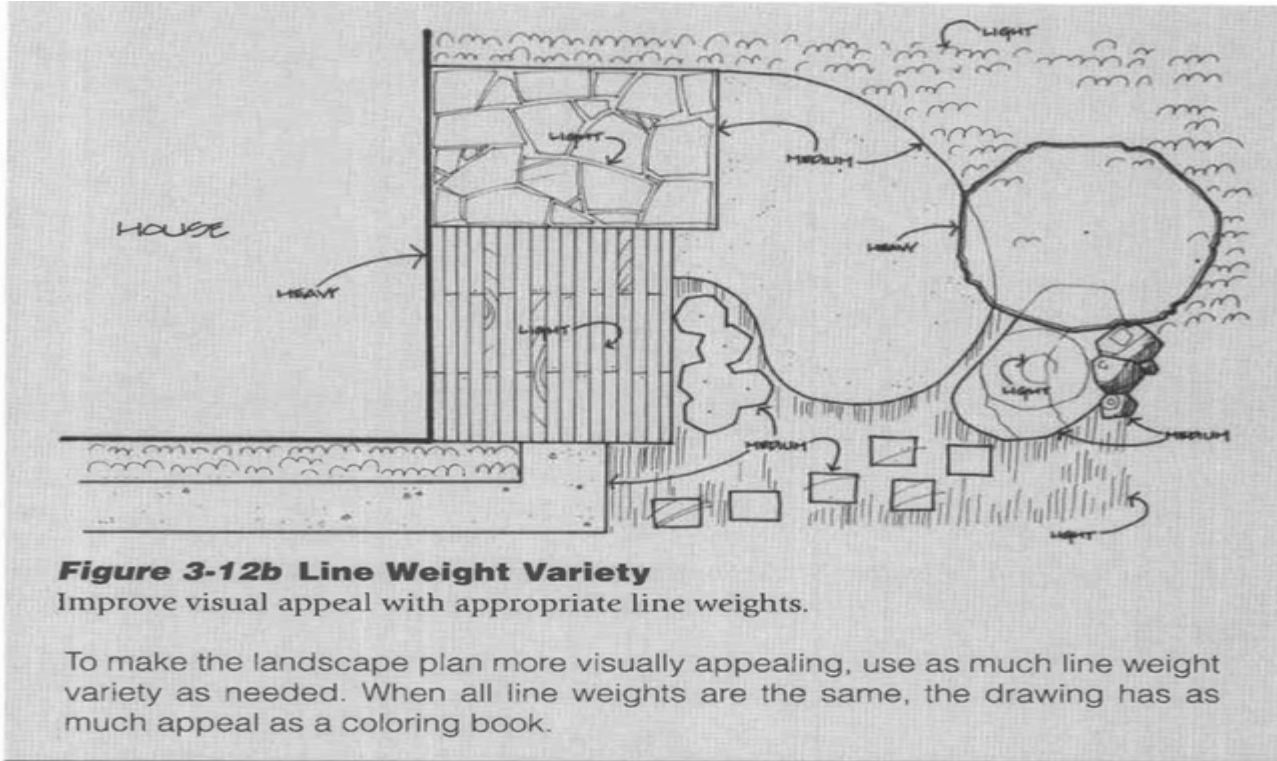


Figure 3-12b Line Weight Variety
Improve visual appeal with appropriate line weights.

To make the landscape plan more visually appealing, use as much line weight variety as needed. When all line weights are the same, the drawing has as much appeal as a coloring book.

Heaviest Weight

- *Round tip marker*. The heaviest weight lines in the drawing will be the border and title block (if used) to help frame and focus attention to the plan. Use a round tip marker to draw the border and title block (or use predrawn border paper).

Heavy Weight

- HB lead (double line) • 0.7-mm ink (double line)

The next heaviest line should be on the floorplan of the house. Some designers like to use heavier weights on immovable objects, such as walls. Regardless of preference, heavy weight on the house lends a balance to the drawing, since the house is the focus of the surrounding landscape.

Also, a heavyweight line (although not as heavy as the house) can be used on the canopy of an overhead tree symbol (Figure 3-13). Objects that are closer in space to the observer appear with more detail and greater contrast. By giving more line weight to tree canopies, it gives the impression those symbols are farther off the ground.

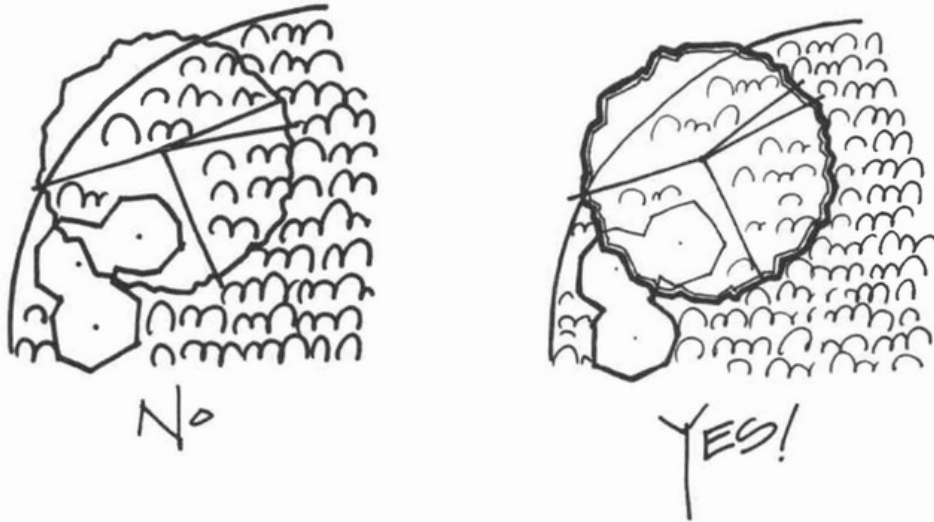


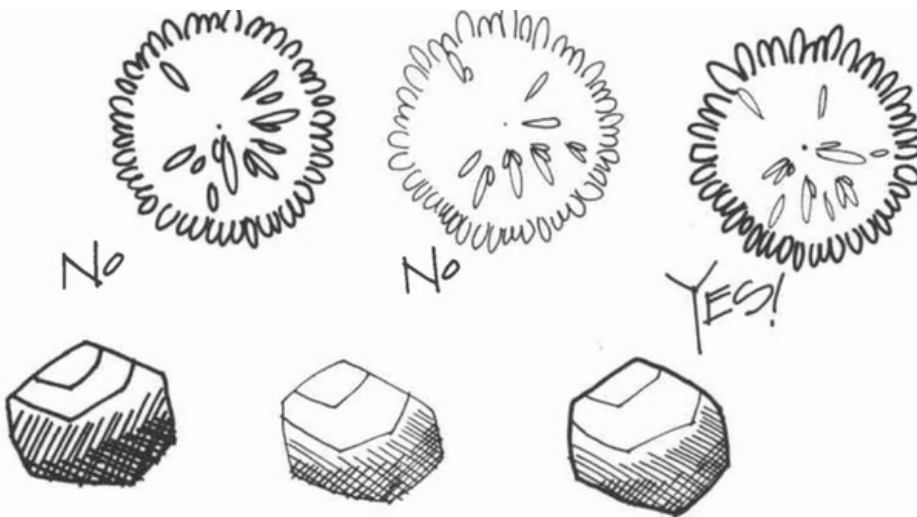
Figure 3-13 Outlines Using a heavier line weight on objects and areas helps define *them*.

Medium Weight

- H or HB lead
- 0.3-mm or 0.5-mm ink

Medium line weights should be used to emphasize *the* outlines of symbols, objects, and forms (Figure 3-14a). This will separate them from surrounding objects, providing more contrast *between the line and white space of the paper*.

Medium weight is also suggested for lettering and property lines. Leader lines *in the* label are a medium line weight (H lead or 0.3-mm ink at most). They are sometimes drawn with a lighter line weight to keep them from becoming so busy, since there are so many of *them*.



**Figure 3-14a
Symbol Detail Line
Weight** Light detail
line weight supports *the*
heavier defining outline
of symbols.

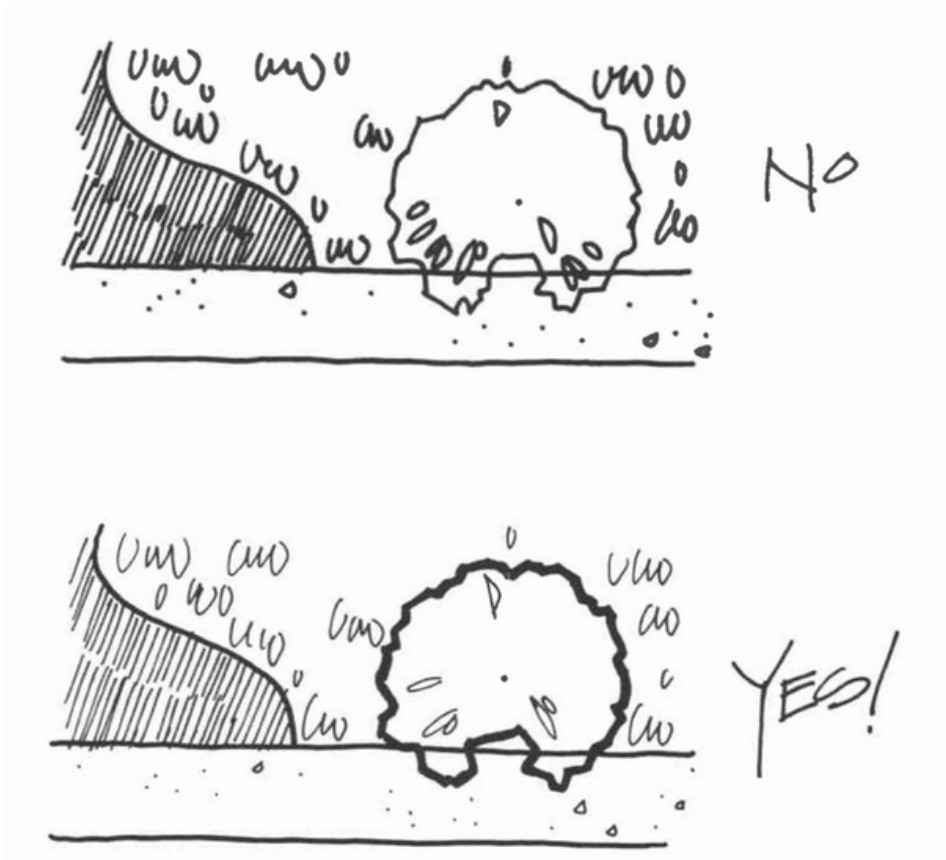


Figure 3-14b Ground Detail Line Weight

Detail on ground plane is lighter to support defining outlines.

Light Weight

- 2H lead
- 0.1-mm or 0.3-mm ink

Lightweight lines are typically used to draw the detail in a plan (Figure 3-14a and b). This includes any type of texture on the ground plane or within the outline of a symbol. There are exceptions that will be noted in later chapters. Lightweight details help emphasize the defining outline, as well as add line weight variety to the drawing for more visual interest.

Another use for lightweight lines is underneath the canopy of overhead tree symbols (Figure 3-15). Since the outline of the overhead symbol is already heavier, drawing the detail underneath *lighter than the detail outside the symbol* further pops the tree symbol off the paper for additional visual interest. Keep in mind that these lines are lighterweight than the detail in the rest of the drawing, so a lighter line with a 2H lead or a 0.1-mm ink can be used (as long as 0.3-mm is used for the rest of the detail).

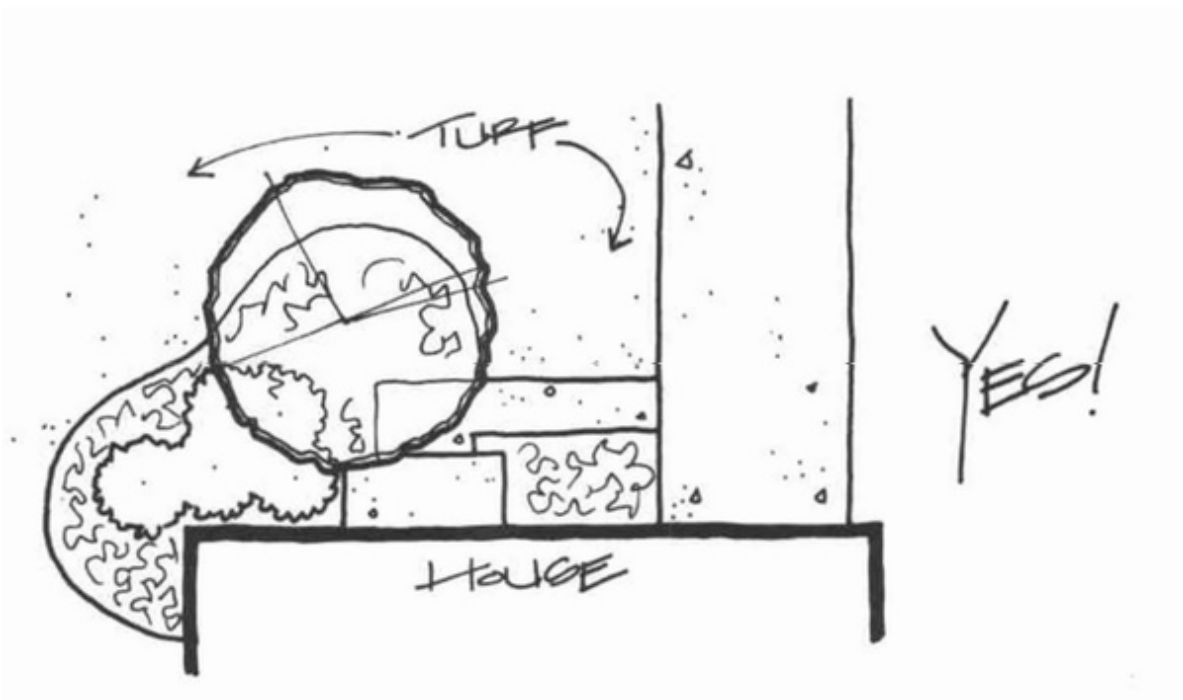
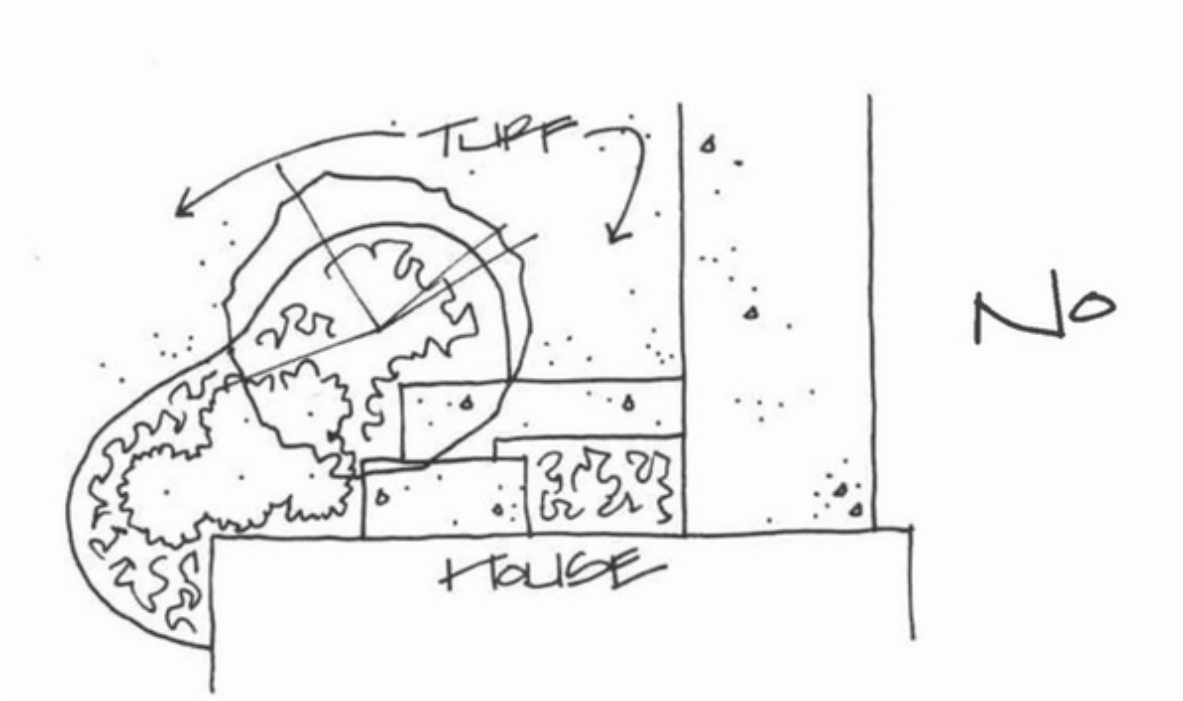


Figure 3-15 Line Weight under Symbol Light line weight for lines drawn under symbol for clarity and to visually "lift" symbol.

Lifting Line Weight

Kneadable erasers are helpful lifting weight from lead lines (Figure 3-16). If you forget to draw detail lighter underneath an overhead symbol, dab it with a kneadable eraser a few times to lighten it.

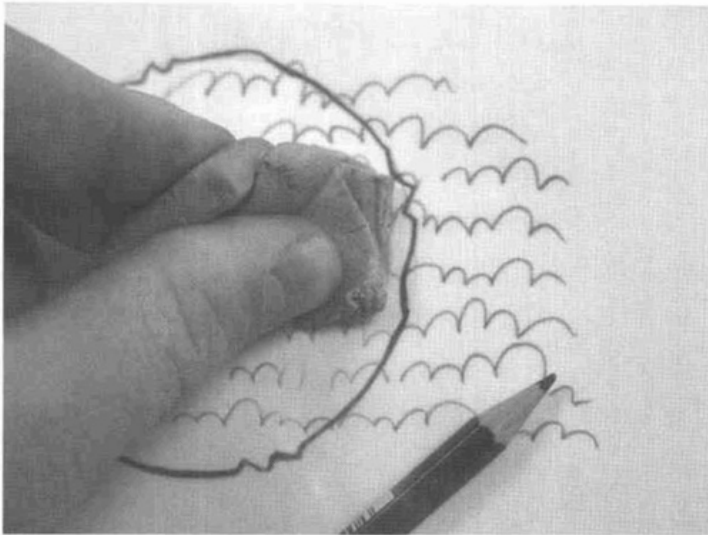


Figure 3-16 Lifting Line Weight

To lighten line weight, use a kneadable eraser.

Lightest Weight

- 4H lead
- Ink should not be used

The lightest line weights on the drawing are the guidelines. Guidelines are used for lettering and drawing symbols. Only 4H lead is used, so that the guidelines will not show up on the print.