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Foreword

It is easy these days to assume everyone knows how to use new media. One probably imagines that by now new electronic media and image making are embedded in the DNA of everyone who uses a computer, personal device, or other digital tools. But the reality is that media and image making are an art form with learned techniques and protocols. There is always need for excellent tutorials that describe basic techniques and their application and I am pleased that Digital Drawing for Landscape Architecture is providing for a new generation of landscape architects training in contemporary digital media and its application as an emerging art form.

I come from the generation that learned manual graphic techniques came of age using digital applications as an extension of these traditional techniques. As a student, I remember learning photography by reading manuals and silk-screening from print-making books. Skills like collage and montage were acquired much more intuitively, and other techniques such as press-on lettering were learned on the job in an office. It is interesting to me to see how much of the old methods are built into the new digital procedures. One of my favorite Photoshop filters is pixelate-mezzotint. From my knowledge of printmaking, this filter makes clear sense to me. Likewise cut and paste tools are basically collage techniques, and dry brush and cross hatch, etc., are based on traditional art processes. Expanded electronic techniques go beyond mere digital adaptation of the traditional to create new graphic and design possibilities that were difficult or even impossible to achieve before. Certain kinds of geometric distortions, such as stretching, bending and inversions, are not only transforming the representation of landscape design but also design itself as new forms and spatial relationships are pioneered in digital space. Combining techniques to create non-standard representation forms has emerging potential as well. This is clearly evident in today's contemporary art world where artists are creating new art which incorporates a vast array of new media in innovative ways to challenge our way of seeing and understanding the world. Today, my office uses an array of representation techniques ranging from drawing to physical model building to digital modeling, and all sorts of combinations of digital imaging and animations, all at a range of differing scales. Ultimately, the best design still results from thinking, designing and representing with multiple scales, views and methods.

This book will become a standard manual for students entering the profession and learning their craft, as well a valuable reference for those already in practice who need to keep current with emerging trends. Just as it was impossible to practice twenty-five years ago without knowledge of ozalid printing, leterset, zipatone and rapidiograph use, today it is unimaginable to practice in a world without Photoshop, Illustrator, 3DStudioMax, Rhino, SketchUp and CAD.

—Ken Smith
The By Pixel method was used to select these dispersed pixels from the solid color background. For the lower part of the tree, making the selections by hand will be easier and more accurate than using the Color Range or Magic Wand selections. The final steps to selecting away the entourage element from the background are shown here:

12. Use the Eraser tool to remove the larger parts of the background around the trunk.
13. Using the Lasso tool, select the areas around the trunk to be removed and press the Delete key.
14. The final entourage element is ready to be used in a section or perspective.

**Figure 8.28.** After the blue pixels are selected, the pixels can be deleted or the color of the pixels can be changed to match the background of the image.

**Figure 8.29.** Use the Eraser tool to quickly remove large parts of the background.

**Figure 8.30.** Using the Lasso tool, select the areas near the trunk, and erase the pixels using the Delete key.

**Figure 8.31.** The final image is ready for use as entourage.
Design Diagrams

AIA Headquarters, Boston, MA; analysis diagrams.

vehicle circulation

primary road

parking space

pedestrian circulation

primary path

program

vegetation

lawn

ornamental

wet plant

canopy

Perkins Road Overpass, Baton Rouge, LA; site analysis.
The Pen tool can be used to draw more than straight lines. It can also be used to draw complex curves or multiple segment lines that are a combination of lines and curves. The curves that the pen tool draws are called Bézier curves because of the mathematics used to draw the curve. The Bézier curve is named after a French engineer who originally used these types of curves to design automobile bodies in the 1970s. Bézier curves are now widely used in a variety of digital representation packages.

Instead of using an arc that has a beginning, middle and end, the Pen tool uses a unique mathematical formula to draw the curves. A simple Bézier curve has two endpoints (or anchor points) and two direction lines, as Adobe refers to them (or handles, as referred to in this book). The handles control the direction and tangency of the arc. These handles represent the tangent line of the curve. By moving the handles closer or farther away from the anchor point, you can control the shape of the curve.

To draw a simple Bézier curve, do the following:

1. Select the Pen tool. Click and drag the mouse on the workspace.
2. Click and drag a second point.
3. By clicking and dragging a third point, you lengthen the curve.
4. A single click will create a straight segment in the line.
3. Choose the white arrow and select only the line that was originally drawn. Delete that line to leave only the arrowhead remaining.

4. To create a new Pattern brush, drag the arrowhead into the Brushes dialog box.

5. Draw a line using the Pen tool on the diagram where the new linework will be.

6. Select the line and choose the new Arrowhead Pattern brush from the Brushes palette.

**Figure 12.9.** The linework in this diagram was created using the Pen tool and applying varying stroke weights. The arrowheads were created using effects that are demonstrated on page 127.

**Figure 12.10.** To add an arrowhead to a line, go to Filter > Stylize > Add Arrowheads. Choose an arrowhead from the list.

**Figure 12.11.** After deleting the line attached to the arrowhead, drag the arrowhead into the Brushes dialog box. Choose to create a new Pattern brush.
Figure 13.8. To select all of the instances of a symbol in the drawing, go to the Symbols menu. Click the symbol that is to be selected and choose Select All Instances.

Figure 13.9. After all symbol instances are selected, choose the alternative symbol in the Symbols palette by clicking it. From the Symbols menu choose, Replace Symbol.

Figure 13.10. The symbols will be replaced in the drawing.
5. To move them to the top of the layer stack, select the objects on the top layer of the diagram and use the Move tool while holding the Shift key. To select all of the objects on a single layer, click in the far right area of the layer box.

![Layer list diagram](image)

**Figure 15.6.** To select all of the objects on a layer, click in the far right portion of the layer list. The blue box will indicate where to click.

6. Repeat the process for the other layers in the drawing.

![Layered diagram](image)

**Figure 15.7.** Hold the Shift key and use the Move tool to position the layer in the drawing.

**Figure 15.8.** Repeat the same process for the other layers in the drawing.
Couturie Forest, City Park, New Orleans, LA; site plan.

Lower Ninth Ward, New Orleans, LA; site plan.

Bayou Bienvenue, New Orleans, LA; elevations.
water design

Donnelly Park, New Orleans, LA; site section.

Couturie Forest, City Park, New Orleans, LA; Ecosystems Section Elevation
Couturie Forest, City Park, New Orleans, LA: Canopy Walk section elevation.

Donnelly Park, New Orleans, LA: section perspective.
9. The Other Dynamics option offers one valuable setting: the Opacity Jitter. The Opacity Jitter randomly sets the opacity of each “blade” as it is being drawn.

Figure 21.14. The middle line has the Opacity Jitter set to 50 percent. The lower line has the Opacity Jitter set to 100 percent. This creates a random transparency in the brush, which allows the brush to be blended with other brushes while painting.

Brushes can be used in a design drawing in a number of ways. Most often, Grass Brush or similar brush styles are used to render a ground plane. The ground plane in the following figure is rendered using the Dune Grass brush using multiple layers of brush strokes. The technique involves creating several layers of brush strokes, each with a slightly different color combination. Each layer is then set to a medium Opacity, around 50 percent, which allows the different layers of brush strokes to blend together.

Figure 21.15. The ground plane of this image was rendered using the Dune Grass brush.

Figure 21.16. Making several layers of brush strokes and setting the Opacity of each layer to 50 percent created the ground plane. This allows the different layers to blend together to create the overall effect.
2. Place an image of background trees on a new layer in the section. Adjust the opacity of the layer to make the background images lighter. Make a selection using the existing linework of all areas that are in front of the background. Erase parts of the image where the linework is in front of the background trees.

![Image](image1.jpg)

**Figure 24.2.** The existing linework is used to make a selection, and the background trees are erased.

3. Add entourage trees in front of the background. Each tree should be placed on a separate layer. Each tree behind the linework can be erased using the same selection used to erase the background.

![Image](image2.jpg)

**Figure 24.3.** Foreground trees are added. Cut away parts of the trees that are behind the linework.

4. Add the remainder of the trees in the mid-ground layer; add the grasses or groundcovers.

![Image](image3.jpg)

**Figure 24.4.** Continue to add trees and ground cover plants.
5. Color the linework using a Solid Color adjustment layer, similarly to how the plan rendering is colored.

![Figure 24.5. Fill the linework using a Solid Color adjustment layer.](image)

6. Add people to the image and place them in places that are key to the design. The use of people will draw attention to specific areas of the drawing.

![Figure 24.6. Add people to the composition.](image)

7. Add the front layer of trees. This creates depth in the drawing by layering the space from front to back.

![Figure 24.7. The final composition.](image)
Soundview Park, Bronx, NY; aerial perspective.

Bayou Bienvenue, New Orleans, LA; terrace perspective.
Growing Home, New Orleans, LA; aerial perspective.
Figure 25.5. 3ds Max, perspective illustration.

Figure 25.6. 3ds Max and Photoshop, preliminary perspective illustration.

Because many designers feel perspective illustration requires a vast amount of time, it is often relegated to the final stages of the design process. At later stages of the design process, the concept is often further developed and, therefore, the time spent creating and rendering perspective illustrations is invested only once. This investment should last throughout the design process; therefore, once a perspective view has been established within the design process, it is possible to continue to revise and evolve the drawing. The illustration can be used to test-out multiple design concepts, materials, and/or programs by compositing layers that are organized in the foreground,
Figure 29.6. Creating the mid-ground is important. This should be established first. It helps give a texture reference for creating the foreground and background. The scale of the foreground and background (i.e., the size of the little images used to create the ground plane) should be relative to this mid-ground image.

Figure 29.7. Additional ground plane elements can be added to the drawing.
14. Copy the image and use the Distort tool to place it at the end of the first image. Do this a few more times to build the basis for the path. Once a base for the path has been built, merge the layers.
Figure 29.24. Adjust the color and transparency to finalize the place of the path in the composition.

19. Add people, wildflowers, and shadows to create the final image. The text on the pathway is created by using the Text tool to write the words. Their position is adjusted using the Distort tool in a similar way to the methods used to compose the path.

Figure 29.25. Add people and other details to create the final image.