Part 4

Plan/Section Renderings
Madrid Urban Concourse Park Competition, Madrid, Spain; site plan.
Couturie Forest, City Park, New Orleans, LA; site plan.

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

Bayou Bienvenue, New Orleans, LA; elevations.
Plan/Section Renderings

Bayou Bienvenue, New Orleans, LA; site plan.

Pointe Coupee, New Roads, LA; masterplan.
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.

Viet Village Urban Farm, New Orleans, LA; section perspective.
Chapter 16
Introduction to Renderings

Plans and sections are the quintessential design drawings, providing measured, orthographic, and scaled representations of a site or building. Because they are so widely understood and adaptable, the plan and section are deployed at nearly every phase of the design process. The plan or section is essentially an orthographic projection of a site’s surfaces that unambiguously represents measured spatial conditions. The plan and section are often the truest representation of architectural spaces, although they employ recording methods that are devoid of the norms of human perception.

The landscape plan represents the environment from an aerial view as a measured scaled space. The plan does not typically cut through elements, but instead looks directly down on the site to view tree canopy, building rooftops, and the ground plane below. This form of representation excels at exploring spatial relationships between the ground plane, vegetation, and/or architecture. The plan can be an exacting tool of precision in order to document, unambiguously, what will be built, or it can embody the gestures of a design concept.

The section and elevation are the fundamental architectural drawings that let a designer understand the vertical scale of spaces. The section represents a continuous cut through the landscape and all of the elements that occur along the cut line. The section particularly illustrates the relationship of landscape to the ground plane. A section can be a straight line through a site or may turn in order to capture as much as possible. Because the section’s location in the site can be ambiguous, it is always necessary to clearly mark it within an associated site plan.

Elevations represent views from the edge of the site or from a section cut line beyond. When based on a section cut line, the elevation is often referred to as a section-elevation. The elevation represents everything from the cut line, or edge, back into the distance. Elevations are excellent analytical tools to explore a space’s

Figure 16.1. AutoCAD and Photoshop site plan; Soundview Park, Bronx, NY.
scale, both vertically and horizontally. The cut line location of a section-elevation needs to be marked, but an elevation can be designated by the direction it is viewing, for example “Elevation North.”

Figure 16.2. AutoCAD and Photoshop section-elevation, Perkins Road underpass, Baton Rouge, LA.

Design Process

In the early stages of the design process, analysis and site definition normally rely on the plan for mapping or spatial analysis. As a recording tool, the plan provides a high degree of accuracy and precision in order to map known site features. Plans are also deployed at early stages when developing conceptual diagrams or design sketches. It is important that site representation not be limited solely to the plan in the early stages of the design process. Sections and elevations can be used to map or illustrate existing conditions and test concepts postulated in the plan. The plan will inform the elevation, and explorations in elevation should come back to inform the plan.

During design development, orthographic drawings play a significant role in communicating design intent. The plan typically is used as the centerpiece, annotated and expanded through sections and elevations. In most cases, care will be taken to render the plan in order to represent pragmatic items such as architecture, materials, and vegetation, as well as experiential qualities of the site. The plan, section, and elevations no longer inform one another, but instead create a clear representation of the proposed design concept.

During construction documentation, the plan and section become legal documents, intended to precisely represent the environment that will be built. The drawings must communicate information without any room for interpretation. A line in the drawing represents an edge of an object or condition that will be constructed in the real world. The plan and associated sections and elevations must represent every aspect of the site in order to be completely unambiguous.

Issues in Digital Media

When orthographic drawings are being created with analog media, a physical scale is determined and the drawing is crafted at a specific size. This allows the designer to understand the amount of detail necessary to represent the site and add or subtract
as necessary. When the drawings are physical entities, it is easy to step away from the drafting table or pin the work up on a wall in order to evaluate how well the drawing communicates.

Digital media is different in this regard, as the workspace is a virtual space with a tenuous tangible relationship to the real world. Applications such as AutoCAD allow the designer to work in real-world units in order to create models at 1:1 that can be viewed at any scale or from any vantage point. Photoshop and Illustrator create representations of the real-world output. It is important to know what the output size will be for the drawing as it is being created. In many cases, it is easy for a designer to focus on details that will not be readily apparent when the illustration is printed or to lack the necessary details to properly represent a space. It is advisable to run test prints, especially for novice digital artists in order to comprehend what the final results will be.

Illustrative Components

The plan follows most conventions of graphic or illustrative standards in order to create depth, materiality, and experience. Depth can be represented through a variety of methods including lineweights, saturation, and screening. Typically, objects that are the closest to the viewer will have the strongest lineweights and will be more saturated in color. This can vary slightly in a landscape plan, as it may be necessary to render vegetation canopies slightly transparent in order to clearly represent the conditions on the ground plane below. Simple shading on the shadow side of edges, vegetation, or architecture will begin to articulate the complexities of a three-dimensional landscape. The sense of depth can also be heightened with consistent shadows, where the length of the shadows are proportional to the elements casting the shadows.
Materiality refers to the process of representing a surface’s material qualities with textures and shading. The scale of a material’s texture is the most important component to convey a surface’s materiality. If the texture is over- or under-scaled, the viewer has a hard time comprehending the actual relationship between adjacent components. Poorly scaled textures also create confusion in the scalar dimensions of a space, negating proportional relationships that may be interpreted from the plan.

Experience is a much more ambiguous element when a site is being represented, but it should not be overlooked. It is important to pick up on the contextual qualities of the environment. When the experiential qualities of a site are being incorporated, it is important to clearly focus on a theme or topic. As an example, if the site being illustrated is a post-industrial brownfield that historically supported heavy industry, it might be appropriate to incorporate textures from site photographs depicting industrial decay. As another example, if the design proposal focuses on the manipulation of light, it might be appropriate to exaggerate the effects of light and shadow within the rendering in order to convey this experience.