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NKBA Drawings and Documents

Kitchen and bath drawings are referred to as a *set* of drawings or plans. These drawings give a visual representation of how the space will look when completed as well as where items are to be installed. Each drawing has a purpose and presents information necessary for individuals involved with the project, including the installer, contractor, electrician, plumber, and others involved. Each page in the set of drawings is numbered and cross-referenced to the relevant drawing. There is an industry standard order of drawing placement within the set of plans.

An overview of each page found in a set of NKBA drawings and documents is described in this chapter. You will learn how to create the various drawings step-by-step as you read through this book. To help you focus on key components of this chapter, learning objectives are listed next.

Learning Objective 1: Identify drawings in a set of NKBA plans.

Learning Objective 2: Understand cut height and its relationship to the floor plan.

Learning Objective 3: Understand components found on the different types of drawings.

THE SET OF NKBA DRAWINGS

Each sheet in a set of drawings is identified with a title block placed at the bottom or right side of the page. Drawings are bound on the left side. The title block contains important information that identifies the type of drawing and project specifics (see Figure 1.1).

Together the drawings and documents communicate the entire scope of the project as well as all the pertinent details. We must have client approval on all drawings for the project to ensure there are no questions regarding the work that will be completed. It is important that the entire set of drawings be reviewed by everyone involved with the project. The typical set of NKBA project drawings consists of a title page, floor plan, construction plan, mechanical plan, and interior elevations. Detail drawings and cross-sectional drawings may be needed to show more specific details. A perspective drawing is often included to show a three-dimensional view of the space. Additional drawings may include a countertop plan, soffit

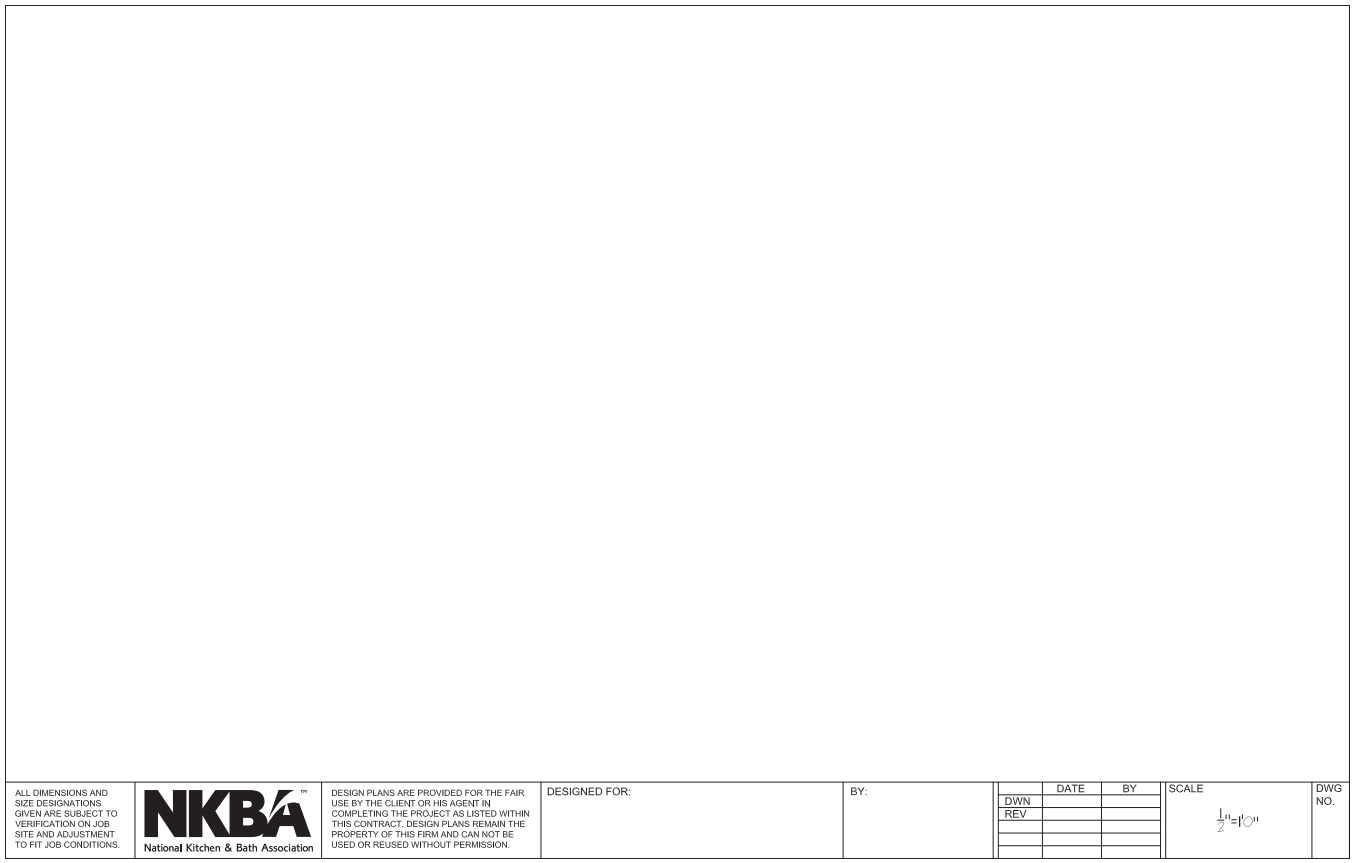


FIGURE 1.1 The title block on each sheet cross references the other drawings in the set of drawings.

plan, or reflected ceiling plan. Other documents also typically included are a schedule, specifications, and a design statement (see Figure 1.2).

Title Page

The title page is the cover page for a set of drawings. Information typically included on the title page is the client or building name, location, designer's name and design firm's name, a key to the symbols for materials, and an index of the drawings. It may also include an illustration (see Figure 1.3).

Floor Plan

The floor plan is the central reference point for all the other drawings in the set of documents. A floor plan is an overhead cutaway view of the room. It generally depicts the entire room and shows all major structural elements, such as walls, door swings, door openings, partitions, windows, and archways. It also shows cabinet, appliance, and fixture placement, dimensions, nomenclature, and other necessary notes. There are industry standards used for drafting a floor plan, so that other individuals involved in the project will be able to interpret the information on the drawings (see Figure 1.4).

The typical scale used for NKBA drawings is ½″ = 1′–0″ (1:20 metric). This scale allows the drafter to provide the required level of detail. The dimensions written on the plans are exact and are always used as the actual measurement when reading a plan. Never use a scale to measure dimensions on a floor plan. The plan could be distorted from duplication or a line could be off. Always use the dimensions written on the floor plan. Sometimes the drawings may not be perfectly to scale, in which case there may be a notation "NTS" ("not to scale") in the title block.

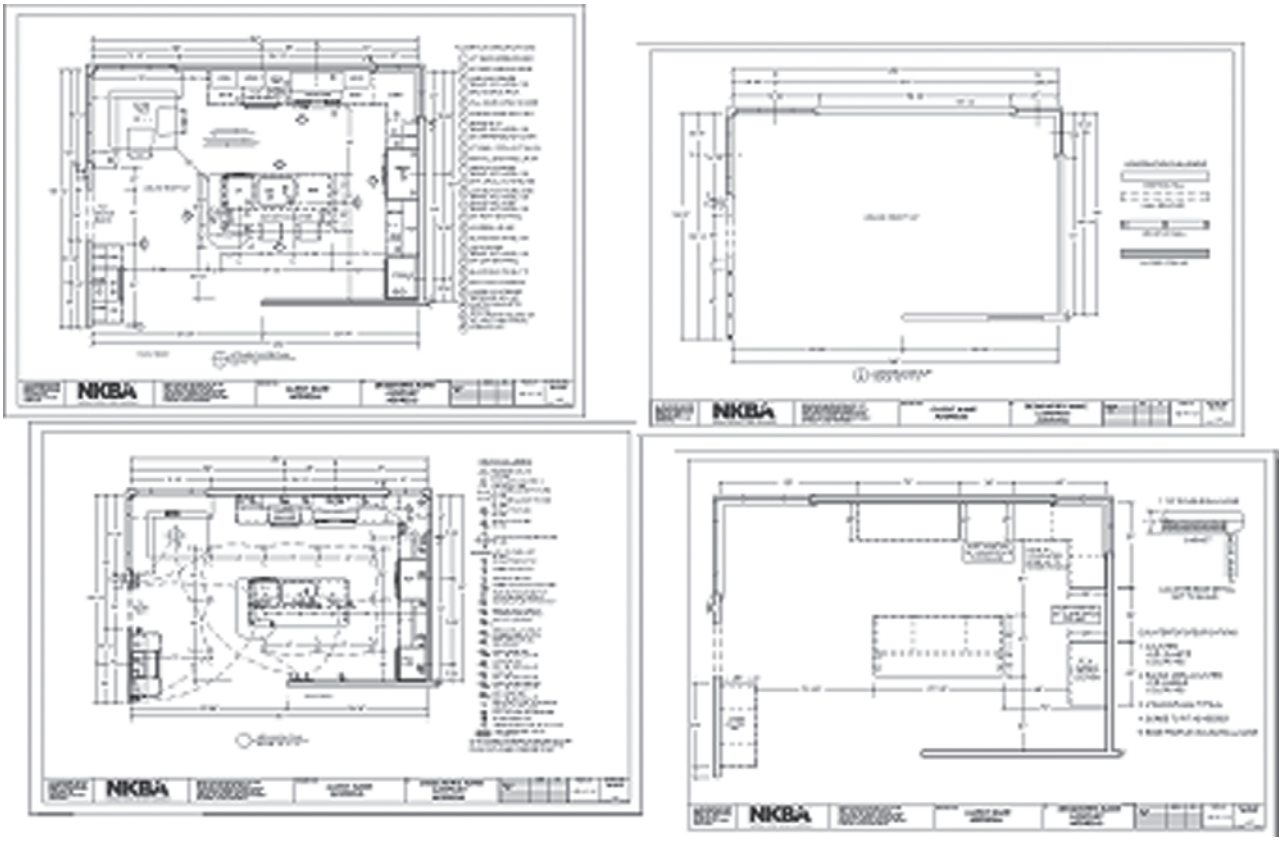


FIGURE 1.2 Drawings found in a typical set of NKBA drawings.

There are line types and symbols used on a floor plan and other drawings that are standard in the industry. Specifications are also placed on the floor plan to provide more specific information. These are explained in detail in chapter 4 (see Figure 1.5).

Construction Plan

A construction plan is another type of drawing found in the set of NKBA drawings. If walls or openings need to be altered from their original locations, a construction plan is required.

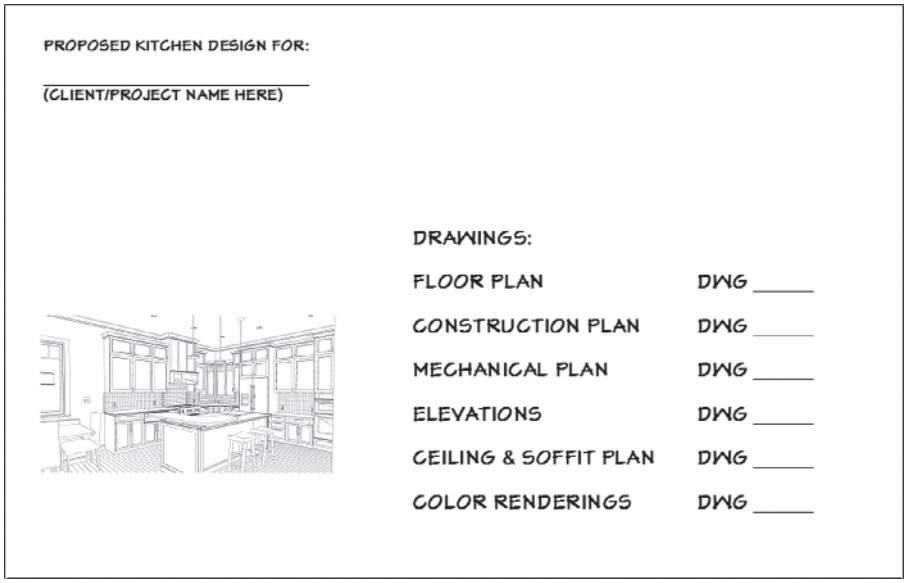


FIGURE 1.3 The title page is the cover page for the set of NKBA drawings. This page typically includes the client's name and an index of drawings.

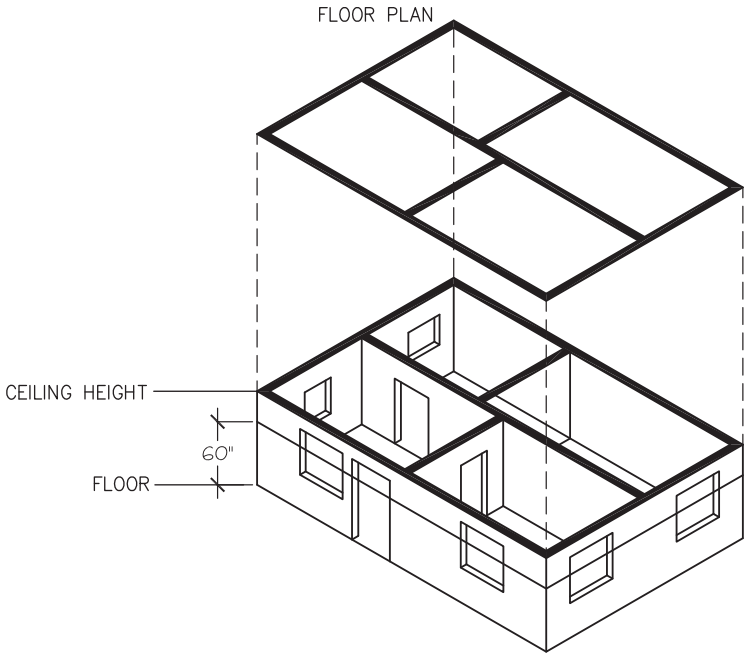
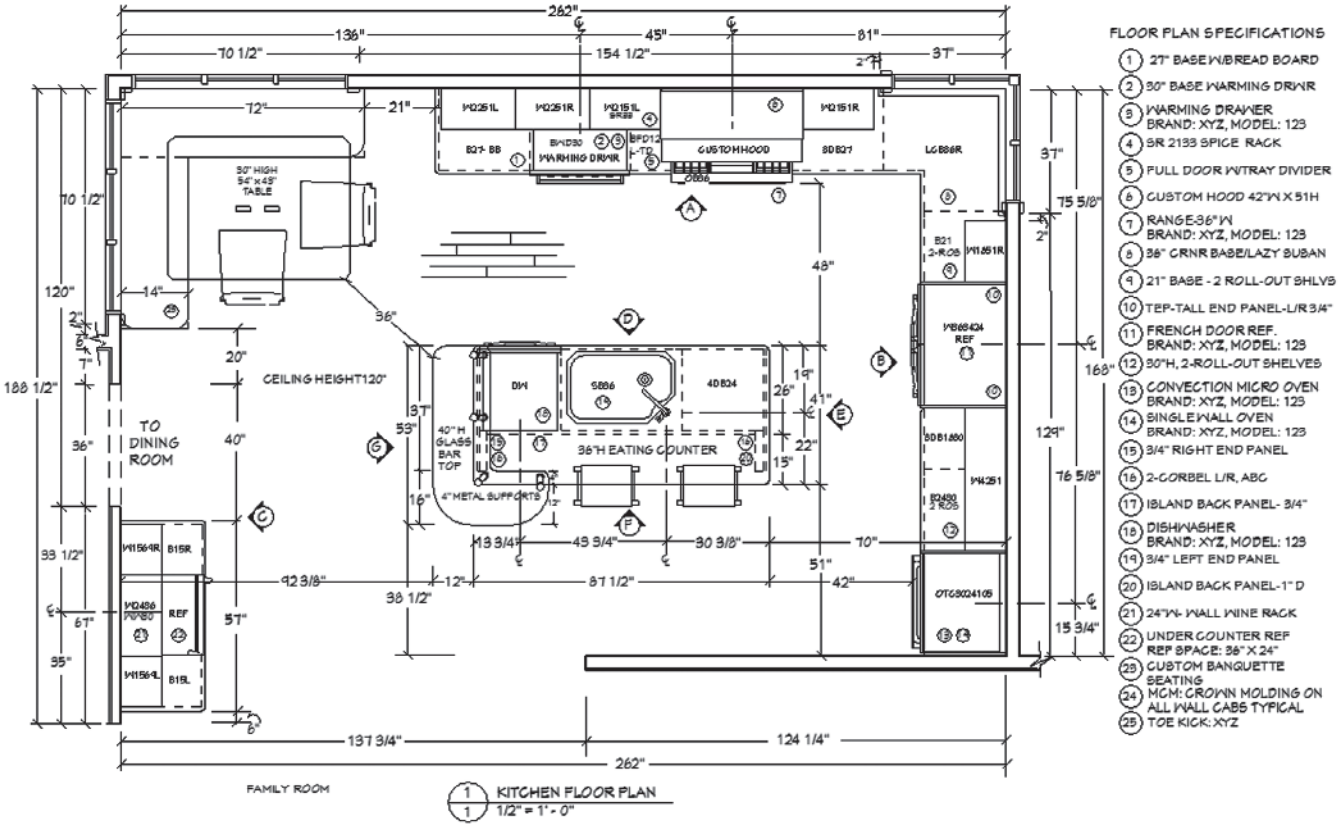


FIGURE 1.4 Cutting plane height (cut height) is at ceiling for NKBA drawings so all details may be captured in the design of the space.

This plan shows both the existing floor plan and the changes to be made to achieve the design. Changes include items such as removing and/or adding windows, doors, walls, plus more. Specific wall symbols are used to denote changes made to original floor plan of the space. More information can be found in chapter 6.

The construction plan includes only the walls, changes to the walls, dimensions, and a construction legend indicating what the symbols represent (see Figure 1.6).

FIGURE 1.5 NKBA floor plan with floor plan specifications on the right side.



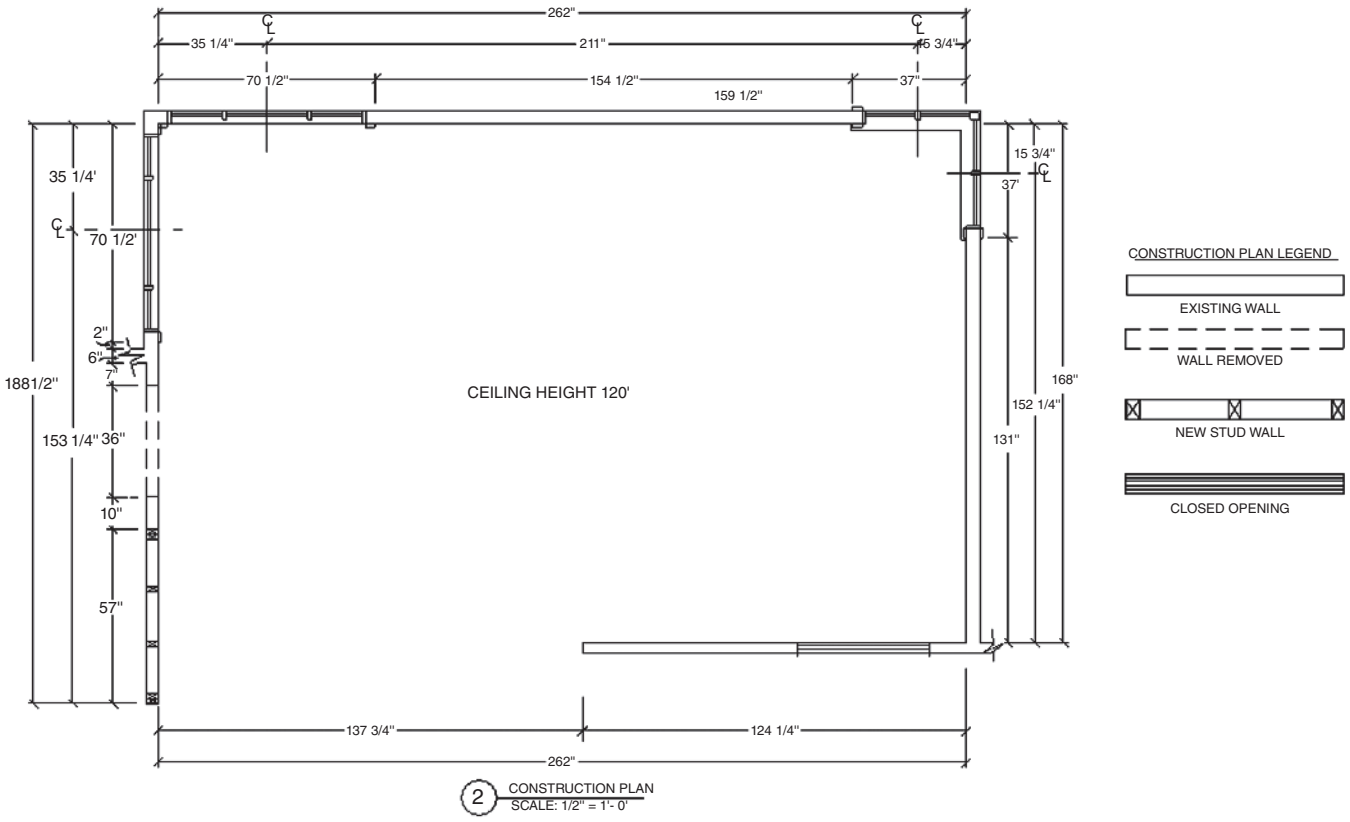


FIGURE 1.6 Construction plan indicating new walls and walls to be removed. Note construction legend on right side of drawing.

Mechanical Plan

Another drawing in the set of NKBA drawings is the mechanical plan. The mechanical plan indicates placement of the electrical system, lighting, plumbing, heating, ventilation, and air conditioning (HVAC). As with the other plans, standard symbols are used on the mechanical plan to denote each item found on the plan. (More information can be found in chapter 3.) The mechanical plan must have a legend that illustrates the symbols used on the plan along with descriptions, and it must cross reference all symbols on the floor plan. The mechanical plan contains a great deal of information. The cabinet nomenclature is omitted from the plan so that all information can be more easily read (see Figure 1.7).

It is important to understand mechanical plans because, as you create a design, you may need to determine whether there is any flexibility in the plumbing supply line, drain, or vent locations, for example. Most likely you will not illustrate the entire heating and air conditioning system, but you do need to identify where the vents are and should be aware of where the ducting is within the structure and how it will affect your design.

Interpretive Drawings

An interpretive drawing helps viewers visualize what the finished project will look like. Interpretive drawings are used as an explanatory means of understanding the floor plans. The most common interpretive drawings are interior elevations and perspectives.

Interior Elevation

The interior elevation (elevation) is a two-dimensional drawing of the interior wall as you are facing it. All walls with cabinets, the sides of an island, and any built-in items and architectural features need an elevation to show how they will look when installed. This drawing is to scale and includes the heights and widths of all items. Since this drawing is

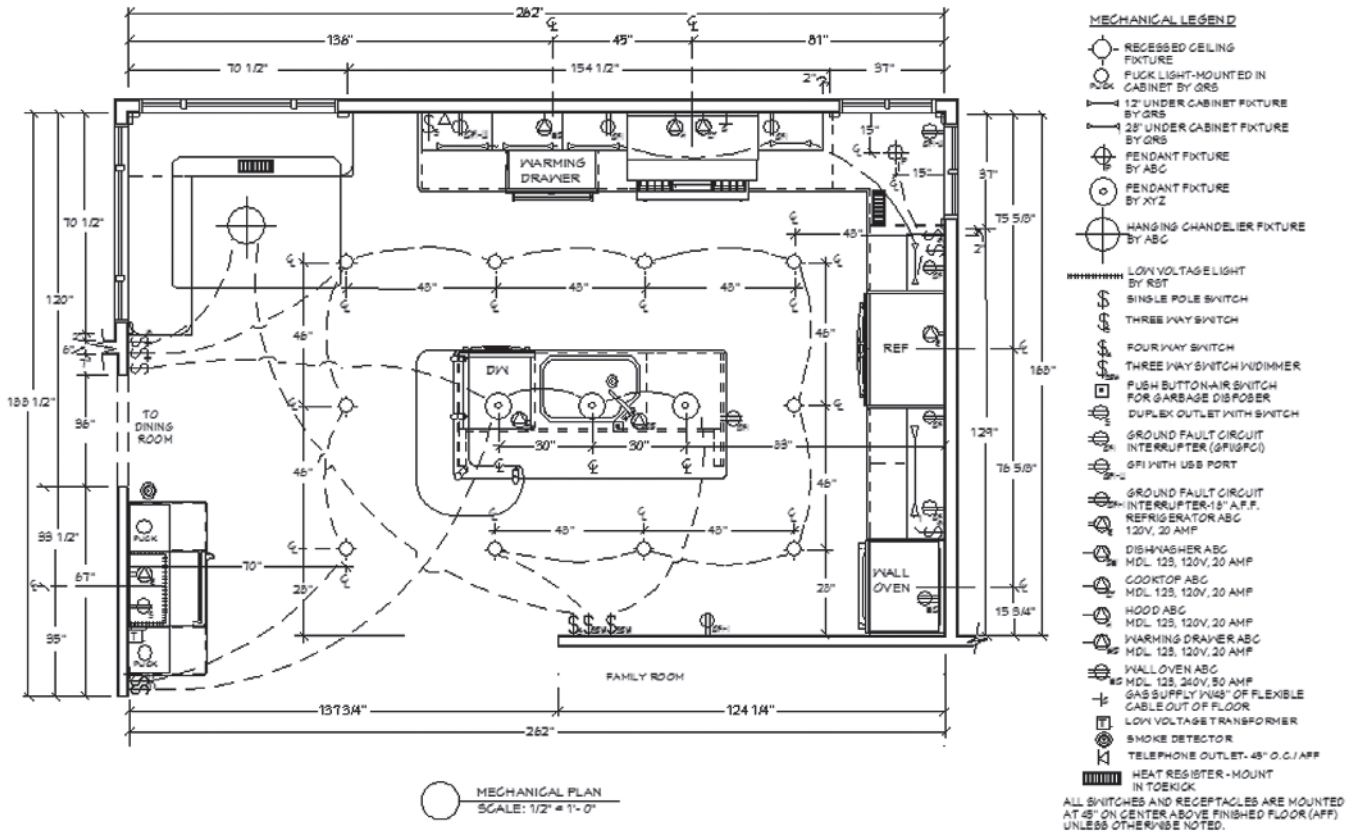


FIGURE 1.7 Mechanical plan showing plumbing, lighting, electrical, heating, and ventilation information. Note the mechanical legend on right side of the drawing.

two-dimensional, it is a flat surface and does not show the depths of items. The interior elevations are cross-referenced with the floor plan (see Figure 1.8.).

Perspective Drawings

The perspective drawing is a three-dimensional view that shows how the given space will look. The realistic appearance of a perspective makes it the ideal type of interpretive drawing because it most closely resembles what the human eye sees. Perspective drawings are not drawn to a *true* scale but to *perspective* scale. This means that items in the drawing appear larger as they are closer to the viewer. Since the perspective drawing is three-dimensional, you can see the depth of items so they look more realistic and in better proportion without distortion (see Figure 1.9).

Section Drawings and Detail Drawings

A section drawing (also referred to as a cross section) represents a vertical cut through the object to show the interior. A cross section can show the interior construction of an object, the relationships of floors in a building, or more detailed construction of items such as cabinetry, moldings, soffits, or backsplashes. To illustrate in more detail how these items are put together, an additional detail drawing may be necessary. The detail drawings show the relationship of parts and components for the specific object you are working with and are drawn at a larger scale. A typical section drawing is used to show how moldings may be stacked on a cabinet for a project (see Figure 1.10).

Additional drawings may need to be included, depending on the scope of work and how detailed and complex the counter and soffit may be. Designers should ensure that all aspects of their designs are clear so there will be no questions regarding the provided drawings.

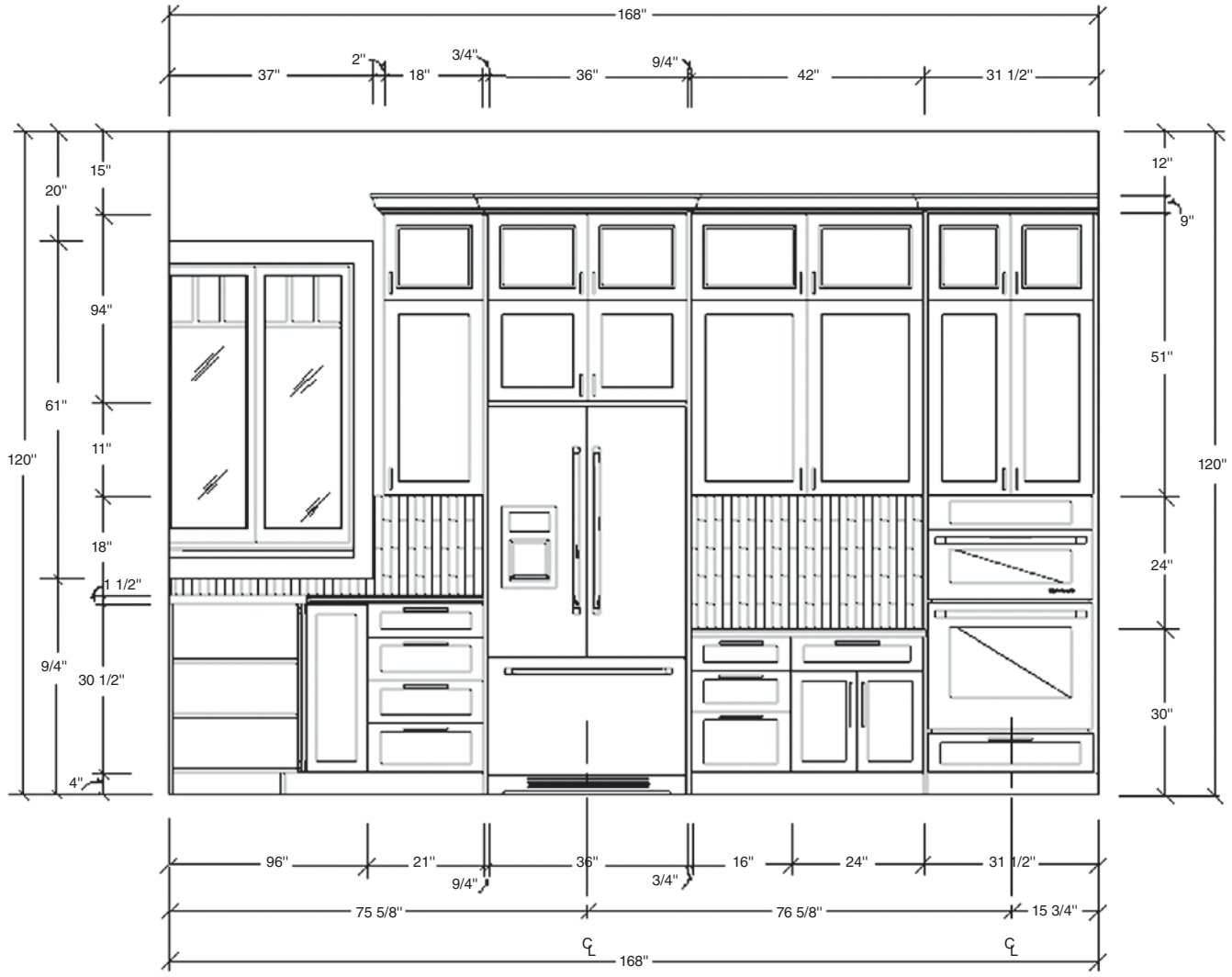


FIGURE 1.8 A typical interior elevation drawing showing one wall of a kitchen with the dimensions on all four sides. It is to scale in height and width but does not convey any depth.

FIGURE 1.9 A perspective drawing provides a three-dimensional view of the space, showing depth. This drawing closely resembles how the human eye sees a space.

Courtesy of Adrean Stephenson, AKBD, Chief Architect

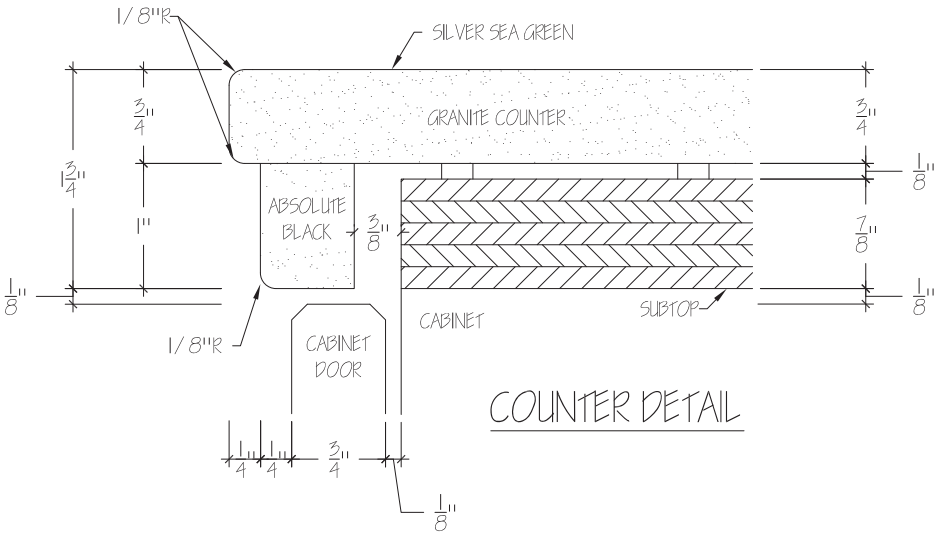


FIGURE 1.10 A section drawing showing a cutaway view of a countertop and how it relates to the cabinet. A detail drawing is an enlarged view of that section.
Courtesy of Leslie Cohen, CKD

Optional Plans

Countertop Plan

A separate countertop plan is helpful to illustrate the installation or fabrication to the allied tradesperson, particularly in complex projects, such as those that combine various counter materials or built-up edge treatments. A countertop plan shows only the walls of the space, the outline of the cabinets, fixtures and equipment, applicable notes, details, and dimensions. A detailed profile of the counter edge treatment is often provided at a larger scale to clearly illustrate the counter design and its overhang relative to the face of the cabinet or to indicate inset doors.

Soffit (Bulkhead) Plan

A drawing showing the space above the wall cabinets, called a soffit plan or bulkhead plan, is required when the soffit is a different depth than the wall or tall cabinet below it. It is also recommended when the soffit is to be installed prior to the wall or tall cabinets.

If the soffit is a complex design, cabinets may not need to be shown. An elevation of the soffit must be included on the soffit plan to further detail complex designs.

NKBA FORMS

In addition to the drawings for a design project, documentation must be provided for necessary project information. The NKBA has standardized forms that may be used for projects.

Schedule and Specifications

A *schedule* is a table that lists like items specified for the design project and may consist of a group of pages within the plans. The schedule lists important product specifics for the items specified for the home, such as cabinets, appliances, and so on. A reference number circled on the plan corresponds to a number on the schedule. A schedule can be considered a short form of specifications and is a quick way to find information at the job site.

Written documents accompanying the plans are called *specifications*, or *specs*. These are descriptions, in words, of the materials and products to be used and the quality expected. For example, appliances and plumbing fixtures are specified by brand and model number. Similarly, the grade of wood that is to be used for the flooring is spelled out.

The specifications can either be on the plans or in a separate document if they will complicate the drawing (see Figure 1.11). Specifications give more detailed expectations of product quality and quantity of materials to be used. A *takeoff* is the process of obtaining the correct information from the specifications or plans to calculate amounts of product needed for the given space. The specifications must be accurate with necessary information.

Design Statement

A design statement is a document created by designers stating how they met the client's wants and needs while justifying why they did what they did in the space. In the statement, designers summarize the design and product selections for clients. Often designers send a copy of the design statement home with clients after the design presentation to help them recall what was discussed during the presentation. A design statement is the designer's opportunity to explain and justify their design describing what was changed in the space, why it was changed, and how it was changed. In a one-page document of 250 to 500 words, the designer pulls together his or her thought process and the reasoning behind the design solution to the client's challenge.

A design statement should be concise and clearly outline the challenges the designer faced and overcame, such as budget, construction constraints, and client requests and lifestyle. Aesthetic choices should also be included to complete the presentation of the project. The key to a successful design statement is to keep it to the point and include how the client's wants and needs were met. Appendix A presents examples of design statements.

All individuals involved in the project must have a complete set of project plans and documents so they understand the scope of work and how items may affect their particular task. For example, the electrician must know if tile will be on wall, as that will affect the installation of outlets.

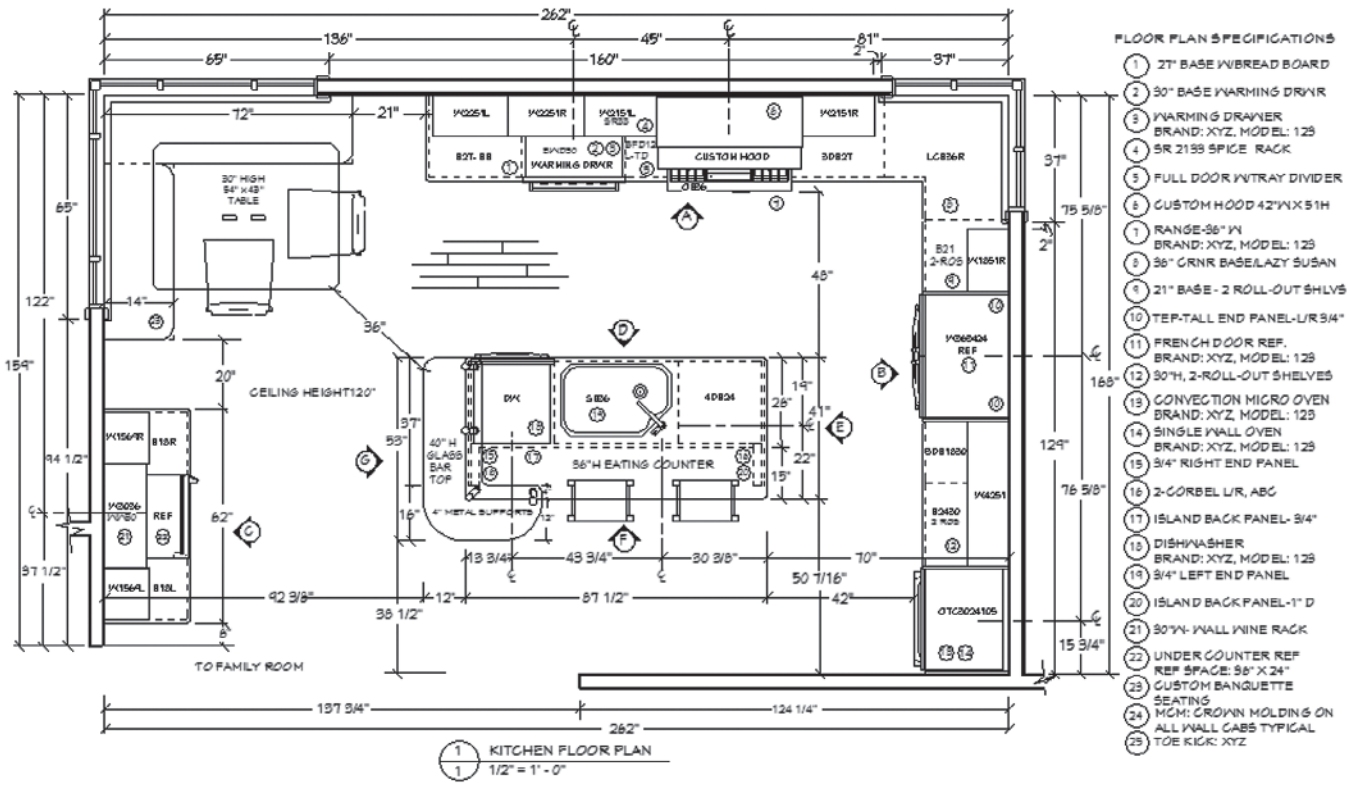


FIGURE 1.11 Floor plan specifications are included on the right-hand side of a floor plan and call out appliance brands and models as well as descriptions of nomenclature for clarification.

Additional Reference Drawings

There are other drawings you may need to reference for your project in order to obtain important information.

You may need to refer to the *architectural construction drawings* for information that could affect your kitchen or bath design. For example, with a remodel project, you need to know what is above or below the space you will be working on, as there could be factors that would affect your design. A designer also needs to know the spaces when working with new construction. Sometimes an idea will not be possible because of the impact it may have on other levels in the home.

Another type of plan you may need to review is a *site plan* or *plot plan*, which is an overhead view of the property around the building. You may want to verify that a new kitchen or bath addition will not come too close to property lines. Or you may want to know how the orientation of the building affects the kitchen or bathroom.

A drawing that shows how the building is affixed to the concrete walls below is called a *foundation plan*. In a remodeling project, you will need to find out if the walls surrounding the kitchen are load-bearing walls or nonstructural partitions. You may need a *structural framing plan* to illustrate just that. If your design calls for removing a wall, you need to understand how to make certain the structure remains secure and how it will remain secure.

Always make sure correct information is obtained from necessary reference drawings for your design project. Assumptions should never be made.

NKBA Drawings versus AIA Drawings

There are several major differences between architectural plans and kitchen and bathroom plans. For example, the NKBA standard drawings differ from the standard drawings of the American Institute of Architects (AIA). A few differences include scale and dimensioning. The scale for NKBA construction drawings is ½″, and the scale for architectural construction drawings is ¼″. The dimensioning is different as well. NKBA standards dimension to the finished inside wall. AIA standards dimension to the center of interior walls and to the outside of exterior walls. Later chapters cover additional details. As a designer, you need to be able to read a construction drawing and translate it into a drawing incorporating the NKBA standards.

Another difference is the height indicated in the drawings. Most architectural plans are drawn as if the space is cut at a height between 48″ and 60″ above the floor. However, if kitchen and bath plans were drawn based on this height, many cabinets and other important details above these heights would be left out. Therefore, kitchen and bathroom plans are drawn from the actual ceiling height so that all cabinets, counters, appliances, fixtures, and other details are shown.

As you learn more about measuring rooms and dimensioning plans in later chapters, you will see that it is the standard of the kitchen and bath industry to measure or dimension finished walls only. This standard has been established because of the critical fit of the products specified for the space. Centerlines for appliances and fixtures are also indicated for proper installation.

SUMMARY

Each drawing in a set of NKBA plans has a purpose and communicates important information for a design project. A title page is included so the reader will know which drawings are included in the set and where they are located. Each drawing has its own standardized symbols so it can be easily understood by all tradespeople and allied professionals.

Chapters 3 and 4 discuss industry standards for drafting. These industry standards help keep the information consistent from drawing to drawing.

As a designer, you need to be able to draft the necessary drawings in a set of plans and to understand the information on each drawing. The goal is to provide all necessary information so the project will be installed correctly. In addition to a visual representation of the space, the drawings provide information used for the ordering of all products specified for the space. Accuracy is critical in drawings.

REVIEW QUESTIONS

1. Which drawings must always be included in a set of NKBA plans? (See "The Set of NKBA Drawings" pages 1-2)
2. Explain why the mechanical plan doesn't show the cabinetry. (See "Mechanical Plan" page 5)
3. Why is a soffit (bulkhead) plan an optional drawing? (See "Soffit [Bulkhead] Plan" page 8)
4. What is the importance of the dimensions shown on an elevation? (See "Interior Elevation" page 5)
5. What information can the three-dimensional perspective show your client? (See "Perspective Drawings" page 6)