



14 KITCHEN DESIGN GUIDELINES, ILLUSTRATED

Recommendations, Industry Standards, and Helpful Tips. Each Guideline also features easy to read diagrams, courtesy of NKBA.

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14 KITCHEN DESIGN GUIDELINES, ILLUSTRATED



One of the most exciting times of a kitchen remodel is the Design Phase. It's a time when you begin to sketch out the floor plan and start clipping pictures from magazines. It's where there are seemingly no limits on what can be done because your project is just an abstract idea that can be changed, tweaked, or enhanced depending on what inspiration comes your way.

There are a multitude of websites, magazines, and TV shows now devoted to kitchen themes, cabinet styles, hardware selection, color schemes and all things aesthetic and pretty. These outlets are great resources, however, there is a need to account for the details that ultimately make a kitchen function properly. There are parameters and rules of thumb that need to be considered in residential construction. There are local and international building codes. You'd also be wise to keep Universal Design standards and ADA/ANSI requirements in mind before undertaking an investment of this magnitude.

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These rules and regulations can also be a bit intimidating and that's why we have composed 14 Design Guidelines to help you formulate an accurate idea of what is possible within the walls of your new kitchen. The National Kitchen & Bath Association (NKBA) provides Kitchen & Bath Design Guidelines to its members. We have combined many of these design scenarios for you as a resource during your kitchen design. Each Design Guideline is easy to read and features illustrations, measurements, and International Code Council (ICC) References.

Please feel free to give us feedback, share your ideas, and by all means ask questions. The more input we get from you the better we can provide the community with helpful resources and ultimately **"RENOVATIONS YOU'LL RUN HOME TO!"**



DESIGN GUIDELINE #1

“THE DOORWAY TO YOUR DREAM KITCHEN”

An often-overlooked detail of a kitchen remodel is the doorway size(s) leading in and out of the kitchen. The doorway may not seem important in the overall scheme of a kitchen remodel but if the details are overlooked in the design phase you could end up with doors that are undersized, don't swing in a direction that makes sense, or even interfere with an appliance or cabinet.

When laying out the door swings it is also important to consider the location of the light switch. Ideally the switch will be located opposite of the hinge side of the door. Chances are there will be times when you will be carrying in handfuls of groceries. Lever style door handles as opposed to round knobs or even double swinging door hinges can make getting through your kitchen door a little easier when your hands are full. Maybe the best solution for a doorway is in fact no door at all.

Inside the kitchen there are more than just passage doors to consider. Each cabinet and every large appliance has a door and swing to consider. These doors need to operate freely and you need room to access the contents inside the door. A good cabinet designer will be able to provide you with a layout that allows the cabinet doors to operate properly. You can help the designer by providing the appliance manufacturer's specifications to ensure enough space is given for proper door operation. Keep in mind that most appliances have the option to reverse the swing. Little details like this these may be all it takes to keep you loving your new kitchen for years to come!

DESIGN GUIDELINE #1

“THE DOORWAY TO YOUR DREAM KITCHEN”

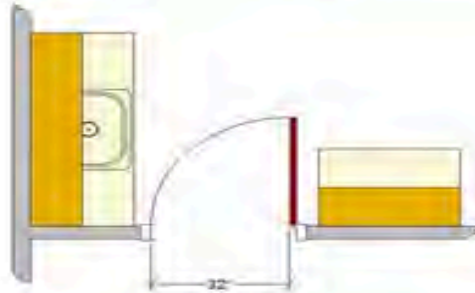
Door/Entry

Recommended:

The clear opening of a doorway should be at least 32" (813 mm) wide. This would require a minimum 2' 10" (864 mm) door.

Code Requirement:

State or local codes may apply.



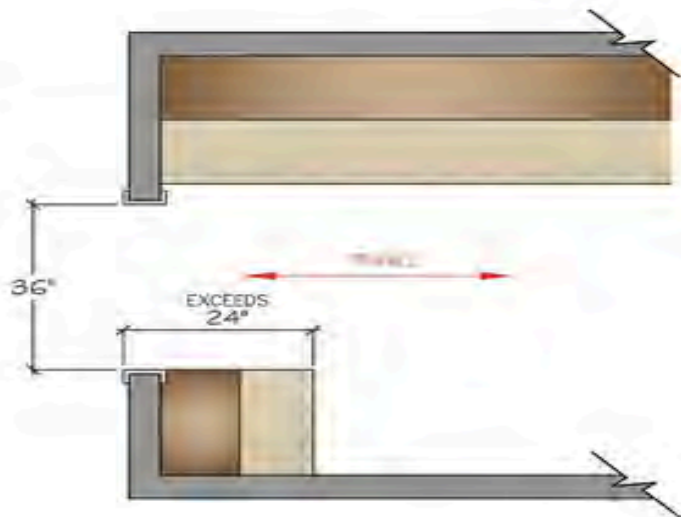
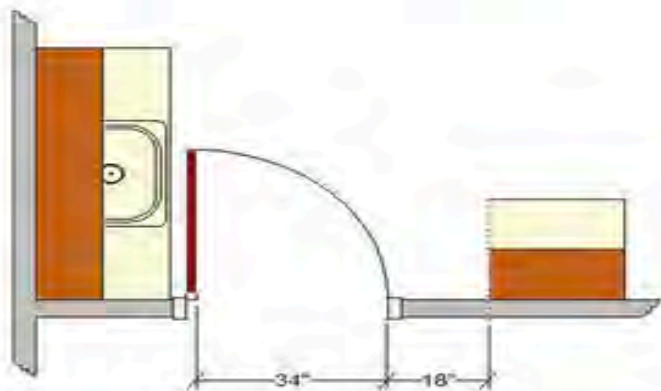
Access Standard

Recommended:

The clear opening of a doorway should be at least 34" (864 mm). This would require a minimum 3' 0" (914 mm) door.

ICC A117.1-2009 Reference:

- Clear openings of doorways with swinging doors shall be measured between the face of door and stop, with the door open 90 degrees. (404.2.2)
- When a passage exceeds 24" (610 mm) in depth, the minimum clearance increases to 36" (914 mm). (404.2.2)



DESIGN GUIDELINE #1

“THE DOORWAY TO YOUR DREAM KITCHEN”

Door Interference

Recommended:

No entry door should interfere with the safe operation of appliances, nor should appliance doors interfere with one another.

Code Requirement:

State or local codes may apply.

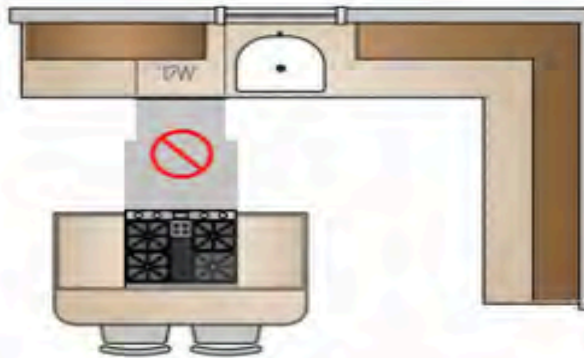
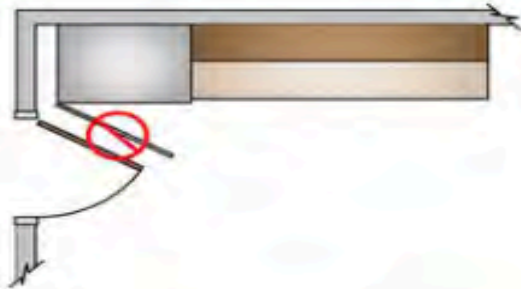
Access Standard

Recommended:

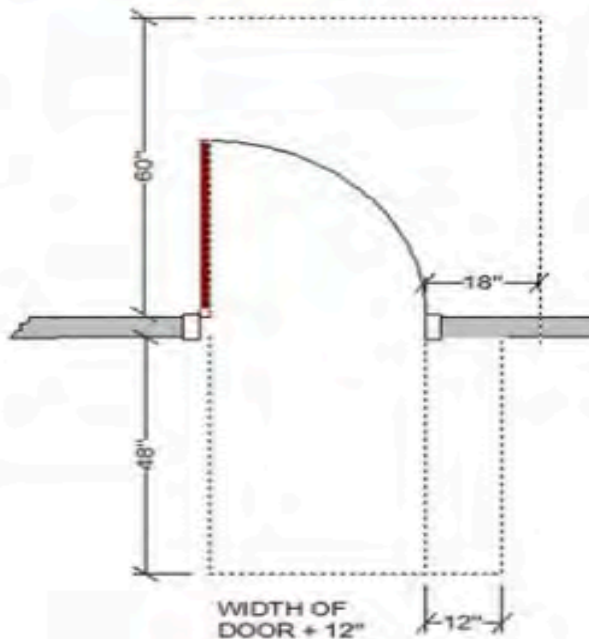
In addition, the door area should include clear floor space for maneuvering, which varies according to the type of door and direction of approach.

ICC A117.1-2009 Reference:

- For a standard hinged door, the clearance on the pull side of the door should be the door width plus 18" x 60" (457 mm x 1524 mm). (404.2.3)
- The clearance on the push side of the door should be the door width by 48" (1219 mm). (404.2.3)



FRONT APPROACH TO SWING DOORS (ACCESS STANDARD 2)

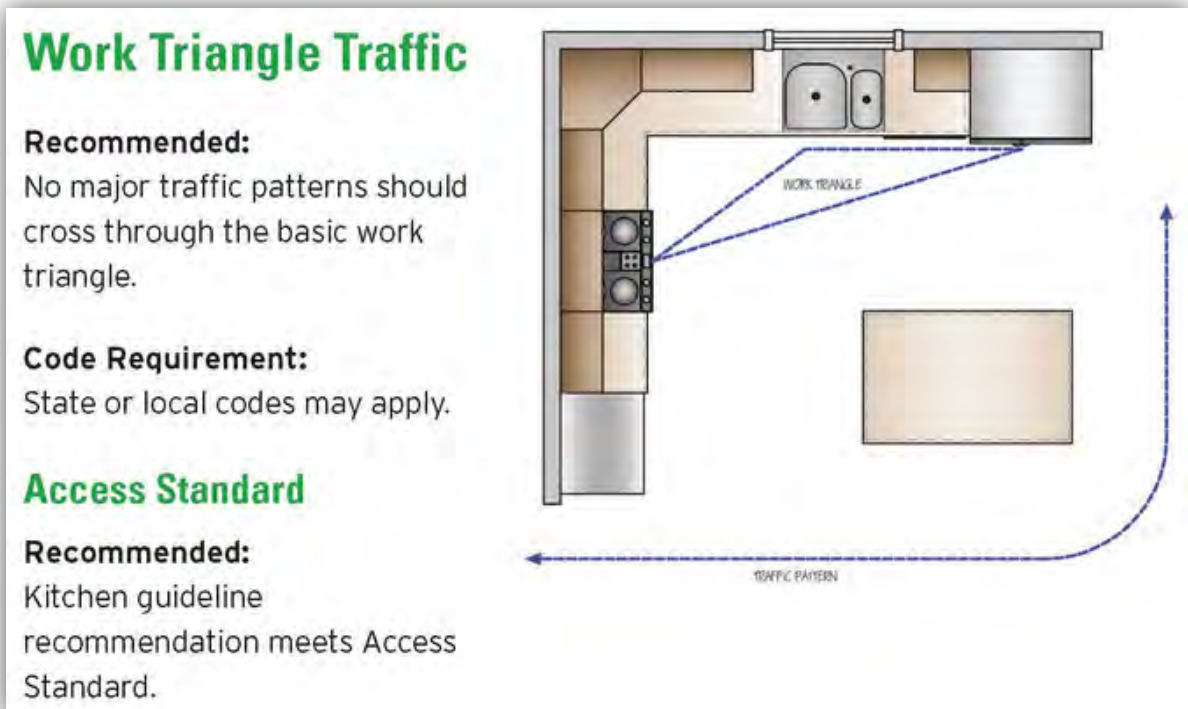


DESIGN GUIDELINE #2

“OBEY THE RULE OF THE TRIANGLE”

Ok so that title might be a little over the top...and no the Triangle I'm referring to here is not found on a dollar bill or a basketball play drawn up for Michael Jordan. For generations in the kitchen design industry the Work Triangle has been the imaginary shape created by 3 well laid-out work centers (refrigerator, sink/ dishwasher, & cooktop). In the diagrams below, you'll see some “rules of thumb” of the Work Triangle.

Although the Work Triangle has long been thought of as an absolute, today's kitchen is not necessarily bound to every one of it's laws. For one, today's kitchen is typically larger than the kitchen found in a post WWII home. A modern kitchen often times has more than 3 major work areas to consider including perhaps an additional prep sink, double stacked oven, warming drawer, and most definitely a microwave.



DESIGN GUIDELINE #2

“OBEY THE RULE OF THE TRIANGLE”

60 years ago the kitchen usually only needed to accommodate 1 chef. In today's household you will often see 2 people working side by side, thus more distance is introduced to the equation to avoid stepping all over one another. You may ultimately end up with two Work Triangles within the kitchen (2 examples are illustrated below).

The way people think about the kitchen and food prep has certainly evolved. The Work Triangle however should not be thrown out altogether. It is still a great place to start when laying out your kitchen design. You might not have to look any further than your existing kitchen to identify a design flaw that could have been avoided if the Work Triangle had been considered. Is your existing fridge practically sitting in the living room? Is your stove shoved in the corner like a naughty child, away from the action? If so, now is your chance to make some layout changes that will bring some continuity to your dream kitchen.

Ultimately your kitchen has to function to meet your lifestyle not the other way around. Your vision of the complete kitchen may very well include every item in the 2014 Sub Zero/Wolf catalog. That's great, but don't waste the time & resources to fill every last corner with an appliance if using it is not going to prove convenient. After all these years experts agree that the most efficient action in the kitchen is still done within a well designed Work Triangle.

DESIGN GUIDELINE #2

“OBEY THE RULE OF THE TRIANGLE”

Distance between Work Centers

Recommended:

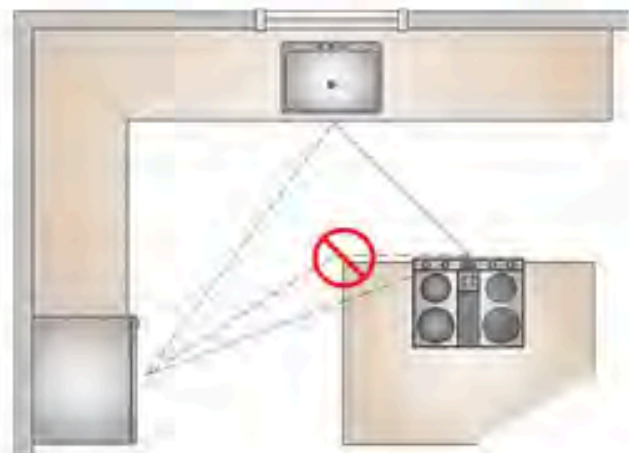
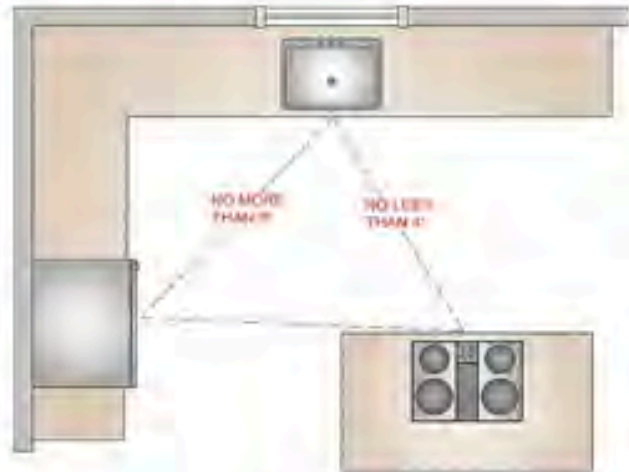
In a kitchen with three work centers,* the sum of the three traveled distances should total no more than 26' (669 mm), with no single leg of the triangle measuring less than 4' (1219 mm) or more than 9' (2743 mm).

When the kitchen plan includes more than three primary appliance/work centers, each additional travel distance to another appliance/work center should measure no less than 4' (1219 mm) nor more than 9' (2743 mm).

Each leg is measured from the center-front of the appliance/sink.

No work triangle leg intersects an island/peninsula or other obstacle by more than 12" (305 mm).

**A major appliance and its surrounding landing/work area form a work center. The distances between the three primary work centers (cooking surface, cleanup/prep sink, and refrigeration storage) form a work triangle.*



DESIGN GUIDELINE #2

“OBEY THE RULE OF THE TRIANGLE”

Separating Work Centers

Recommended:

A full-height, full-depth, tall obstacle* should not separate two primary work centers.

A properly recessed tall corner unit will not interrupt the workflow and is acceptable.

**Examples of a full-height obstacle are a tall oven cabinet, tall pantry cabinet, and refrigerator.*

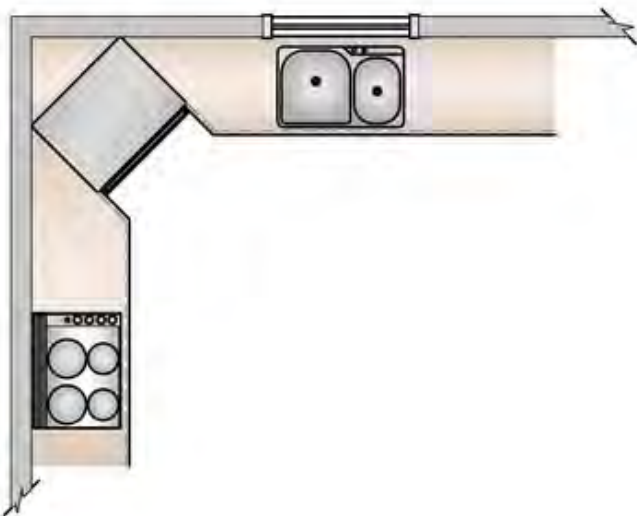
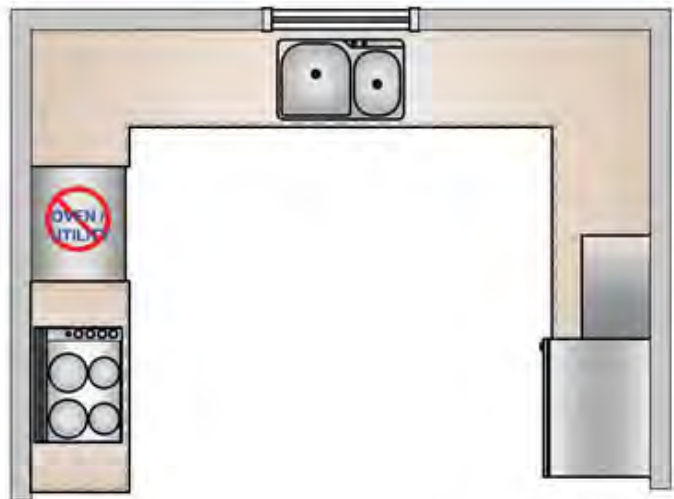
Code Requirement:

State or local codes may apply.

Access Standard

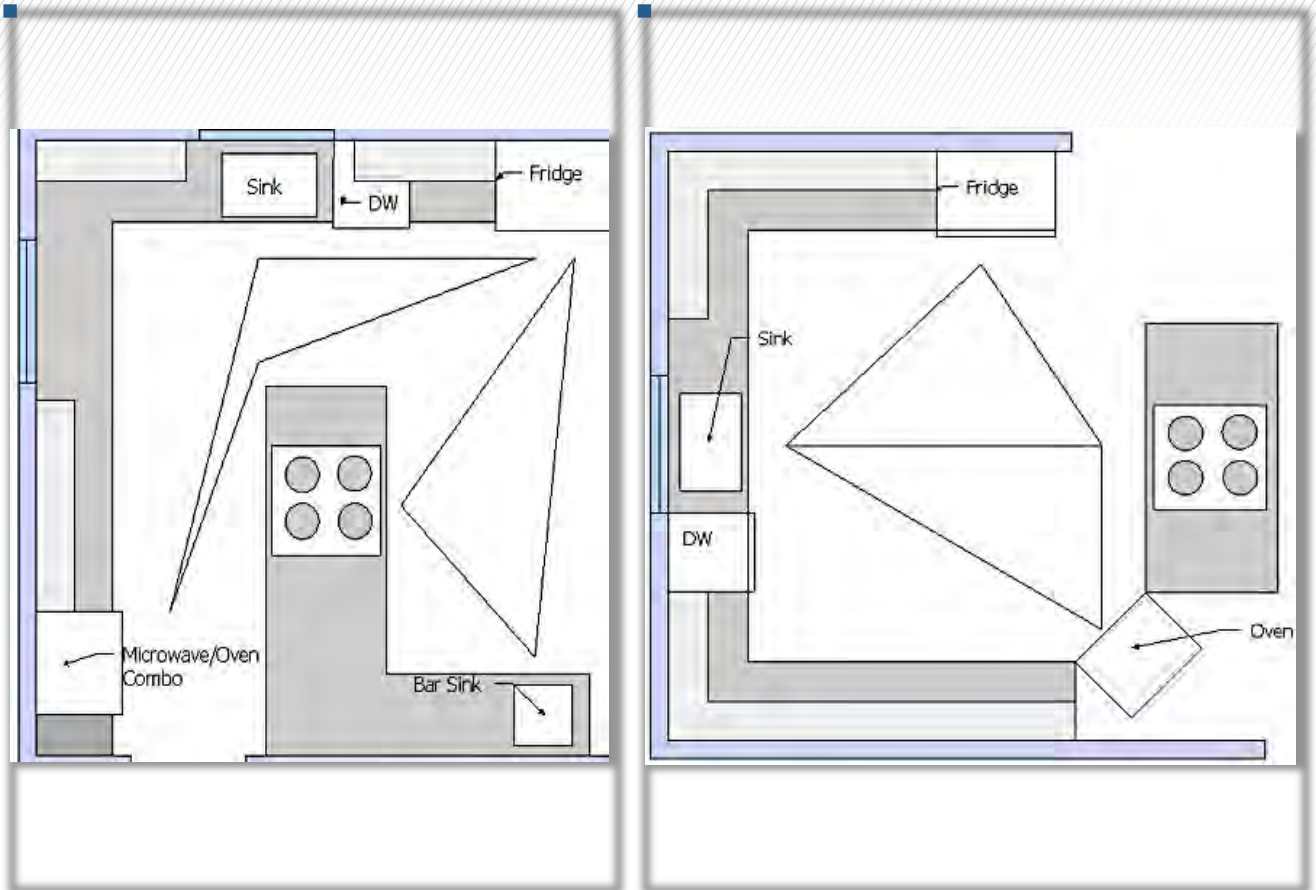
Recommended:

Kitchen guideline recommendation meets Access Standard.



DESIGN GUIDELINE #2

“OBEY THE RULE OF THE TRIANGLE”



Above are 2 examples of multiple work triangles within 1 work space. This should be taken into account when planning for two cooks within a larger kitchen.

DESIGN GUIDELINE #3

“IT’S THE SPACE BETWEEN THE COUNTERS THAT COUNTS”

We've all been stuck in that kitchen, probably shoulder to shoulder with at least a dozen house guests, unable to move; unable to get out. It could be a bottle neck in the galley kitchen or the out-of-place peninsula that creates a flashback of long lines at Disneyland. Its an agoraphobic's nightmare and if it's your house it might be enough for you to avoid hosting another party. From someone who sees all of the great potential of a well designed kitchen this scenario is a major reason to allow for the flow of traffic in your new kitchen layout.

You will notice in the diagrams that there are a variety of traffic patterns to account for in a modern kitchen. Is there going to be more than one person preparing meals? Do you entertain large parties? Are you accounting for the needs of a person using a wheel chair? These are all good questions to consider prior to laying out the floor plan of your kitchen.

Regardless of the square footage a good floor plan will allow for people to move comfortably through its space. My rule of thumb is to keep a minimum of 42" between counter edges. This magic number is a good rule to allow two people to easily navigate in the work aisles of the kitchen without having to bear hug on the way by.

The counter-to-counter work space should not be confused with a general walkway in which the flow of traffic can pass through the kitchen freely while bypassing the work aisles. The minimum width of the walkway should be 36" (more space is always better if possible).

DESIGN GUIDELINE #3

“IT’S THE SPACE BETWEEN THE COUNTERS THAT COUNTS”

If you are having a hard time visualizing this new space, use some props such as furniture or stacked boxes to simulate countertops. Have 1 or 2 other people pass through the space and try to imagine preparing meals or doing the dishes within that space. After doing this you might find that 44" or 46" is going to be the ideal counter to counter space.

Over the years I have had many clients who want to either modify or add an island to their kitchen. My response is usually: "Great!" I love what an island can bring to a kitchen aesthetically and functionally. In the design phase I compare the idea of an island to a ball of clay that has to be shaped and pulled, larger or smaller, initially depending on the available counter-to-counter space. Leaving enough space is critical but often times there is too much space unused in which I will insist on enlarging the island with more cabinets, a breakfast bar, or shelves. Clients have used the added countertop space to incorporate a prep sink, cooktop, or a butcher block into the larger island.

The depth of the base cabinets at the perimeter walls of the kitchen typically measures 24" (approximately 25-1/4" with a countertop overhang). This measurement combined with the desired walkways and counter-to-counter space will allow you to see what space is left for a realistic island or peninsula. Many times I use this formula and determine that a permanent island is not the best choice for the kitchen and we look to explore other options for a useful countertop workspace. Rollaway islands or counter bump outs have been unique solutions that have not taken away from the kitchen's minimum rule of 42" of counter-to-counter space.

DESIGN GUIDELINE #3

“IT’S THE SPACE BETWEEN THE COUNTERS THAT COUNTS”

Walkway

Recommended:

The width of a walkway should be at least 36" (914 mm).

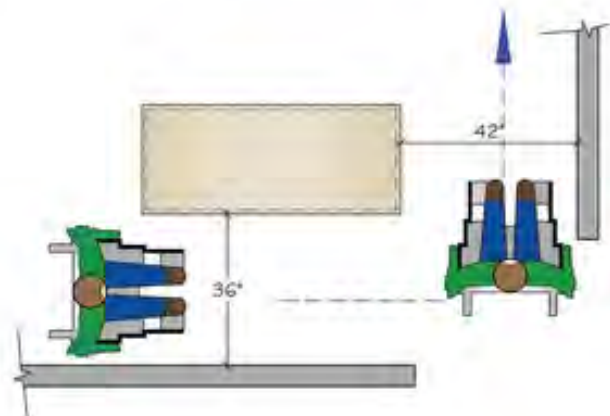
Code Requirement:

State or local codes may apply.

Access Standard

Recommended:

If two walkways are perpendicular to each other, one walkway should be at least 42" (1067 mm) wide.



DESIGN GUIDELINE #3

“IT’S THE SPACE BETWEEN THE COUNTERS THAT COUNTS”

Work Aisle

Recommended:

The width of a work aisle should be at least 42" (1067 mm) for one cook and at least 48" (1219 mm) for multiple cooks. Measure between the counter frontage, tall cabinets, and/or appliances.

Code Requirement:

State or local codes may apply.



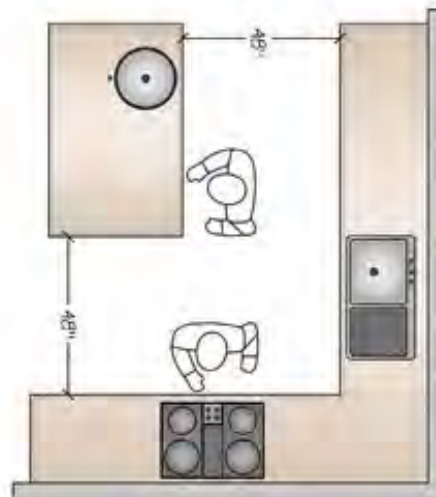
Access Standard

Recommended:

Kitchen guideline recommendation meets Access Standard recommendation. See Code References for specific applications.

ICC A117.1-2009 Reference:

A clear floor space of at least 30" x 48" (762 mm x 1219 mm) should be provided at each kitchen appliance. Clear floor spaces can overlap. (305.3, 804.5)



- In a U-shaped kitchen, plan a minimum clearance of 60" (1524 mm) between opposing arms. (804.2, 1003.12)
- Include a wheelchair turning space with a diameter of at least 60" (1524 mm), which can include knee* and toe** clearances. (304.3)
- A wheelchair turning space could utilize a T-shaped clear space, which is a 60" (1524 mm) square with two 12"



30" x 48"
CLEAR FLOOR SPACES AND
KNEE SPACES MAY OVERLAP

DESIGN GUIDELINE #3

“IT’S THE SPACE BETWEEN THE COUNTERS THAT COUNTS”

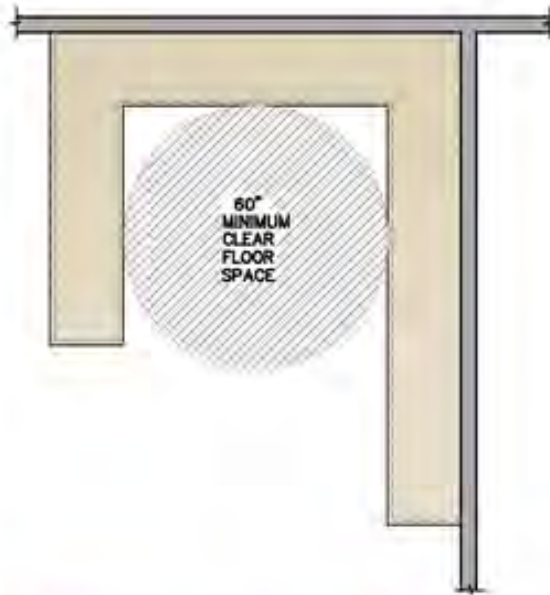
wide × 24" (305 mm × 610 mm) deep areas removed from the corners of the square. This leaves a minimum 36" (914 mm) wide base and two 36" (914 mm) wide arms. T-shaped wheelchair turning spaces can include knee and toe clearances. (304.3)

**Knee clearance must be 30" (762 mm) wide (36" [914 mm] to use as part of the T-turn) and maintain a 27" (686 mm) high clear space under the cabinet, counter, or sink. At 27" (686 mm) AFF, the depth must be a minimum 8" (203 mm). At 9" (229 mm) AFF, the depth must be a minimum 11" (279 mm). The space from 9" (229 mm) to the floor is considered toe clearance and must be a minimum of 17" (432 mm) and a maximum of 25" (635 mm).*

***Toe clearance space under a cabinet or appliance is between the floor and 9" (229 mm) above the floor. Where toe clearance is required as part of a clear floor space, the toe clearance should extend 17" (432 mm) minimum beneath the element. (306.2)*

Code Requirement:

State or local codes may apply.



DESIGN GUIDELINE #4

“IN THE KITCHEN- LEAVE ENOUGH SPACE TO PARK IT”

Your new kitchen will be the location where guests congregate not only for dining, but to chat with the chef prior to the meal or to play games long after the food has been cleared. It will be the social center of the house ...only if it is a comfortable room to stay and sit in. Traditionally family and guests gather at the kitchen table. Modern kitchens often times feature an island with various seating options. Breakfast nooks are also great additions to optimize tight space constrictions. All of these parking spots should hold some standard dimensions to allow traffic to flow freely behind the person seated as well as for the person in the chair.

Nobody enjoys being the person who sits down for a meal but constantly has to "suck it in" to the edge of the table each time someone passes behind (usually with hands full of hot dishes and sharp utensils). Keep this detail in mind when filling the space behind the seats with other furniture or obstructions. If you know the sizes of the furniture prior to building then you can easily use the suggested dimensions illustrated below to allow for an adequate flow of traffic behind the seated diner. If you're planning on purchasing new furniture for the renovated space then take these measurements with you to the furniture store to ensure that the pieces you pick out will fit once they arrive home.

You'll also see (below) that there are various standards for knee space depending on the height of the chair or stool. This can be one important detail that can tend to slip past the attention of everyone during the

DESIGN GUIDELINE #4

“IN THE KITCHEN- LEAVE ENOUGH SPACE TO PARK IT”

design phase and if not accounted for can leave you with seats that are left empty due to their awkward or uncomfortable dimensions. As the height of the chair increases less space is typically needed for knee space. The recommended width however for comfortable seating is given at 48" for 2 seated diners. Remember that these numbers are recommendations and that for larger individuals or those who have disabilities more space will certainly be needed to dine with ease.

If you are planning a new seating area and have not yet decided on the stools or chairs for the room I'd recommend you go to your furniture store and test drive some seats before you get locked in to a specific bar top or counter height.



Seating Clearance

Recommended:

Kitchen seating areas should incorporate at least the following clearances:

- a. 30" (762 mm) high tables/counters: allow a 24" wide × 18" deep (610 mm × 457 mm) knee space for each seated diner and at least 18" × (457 mm) of clear knee space.

DESIGN GUIDELINE #4

“IN THE KITCHEN- LEAVE ENOUGH SPACE TO PARK IT”

Who knows, you may find that sitting in a stool to eat is not as comfortable as you thought. If you can identify the seats first, then you will know exactly what the dimensions of your new built-in seating space should be. This way you can order your cabinets and countertops to your specifications, without worry and avoid costly change orders during the building phase.



DESIGN GUIDELINE #4

“IN THE KITCHEN- LEAVE ENOUGH SPACE TO PARK IT”

Traffic Clearance at Seating

Recommended:

In a seating area where no traffic passes behind a seated diner, allow 32" (813 mm) of clearance from the counter/table edge to any wall or other obstruction behind the seating area.

- a. If traffic passes behind the seated diner, allow at least 36" (914 mm) to edge past.
- b. If traffic passes behind the seated diner, allow at least 44" (1118 mm) to walk past.

Code Requirement:

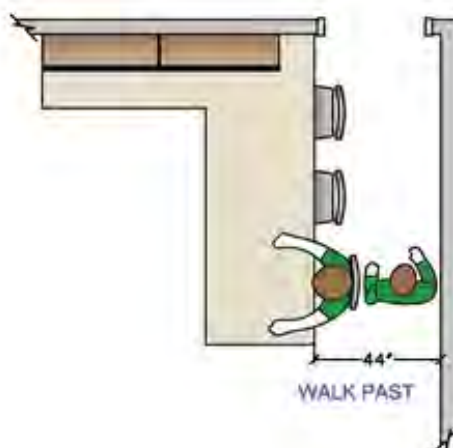
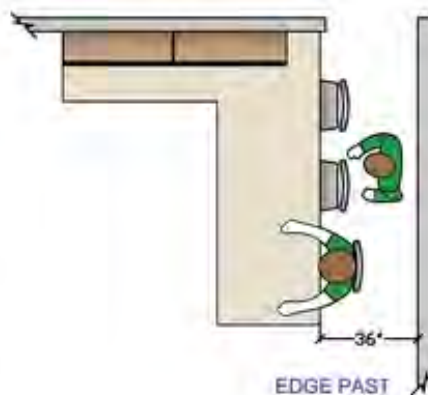
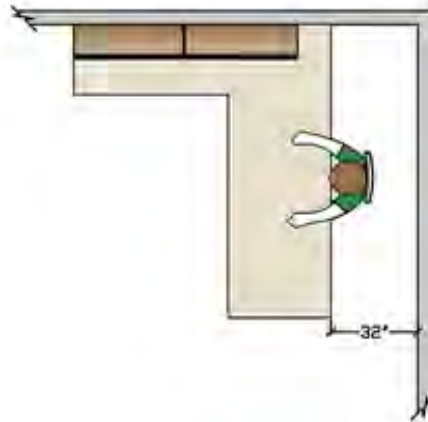
State or local codes may apply.

Access Standard

Recommended:

In a seating area where no traffic passes behind a seated diner, allow 36" (914 mm) of clearance from the counter/table edge to any wall or other obstruction behind the seating area.

If traffic passes behind the seated diner, plan a minimum of 60" (1524 mm) to allow passage for a person in a wheelchair. This will be impacted by the depth of the knee space.



DESIGN GUIDELINE #4

“IN THE KITCHEN- LEAVE ENOUGH SPACE TO PARK IT”

Kitchen Planning Guideline 9 (continued)

b. 36" (914 mm) high counters:
allow a 24" wide × 15" deep (610 mm × 381mm) knee space for each seated diner and at least 15" (381 mm) of clear knee space.

c. 42" (110 cm) high counters:
allow a 24" wide × 12" deep (610 mm × 305 mm) knee space for each seated diner and 12" (305 mm) of clear knee space.

Code Requirement:

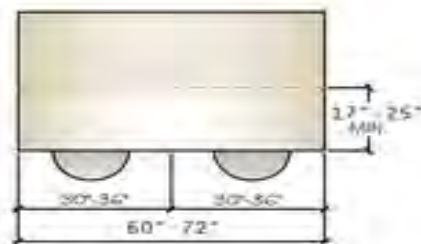
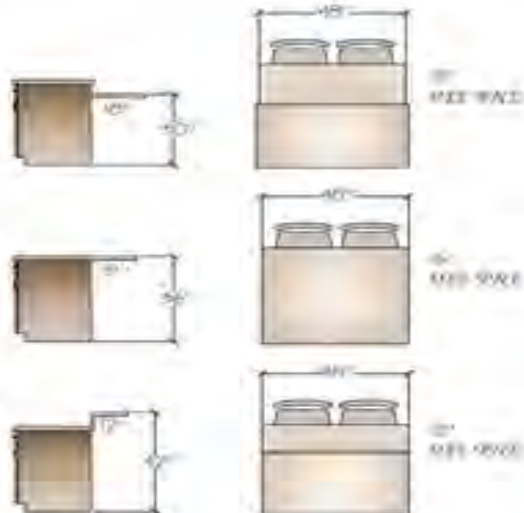
State or local codes may apply.

Access Standard

Recommended:

Kitchen seating areas should be 28"-34" (711 mm-864 mm) high × 30"-36" (762 mm-914 mm) wide × 17"-25" (432 mm-635 mm) deep to better accommodate people of various sizes or those using a mobility aid.

Recommended minimum size for a knee space at a table or counter is 36" wide × 27" high × 17" deep (914 mm wide × 686 mm high × 432 mm deep).



DESIGN GUIDELINE #5

“IT’S YOUR PREP AREA, MAKE IT WORK FOR YOU”

Getting down and dirty in the kitchen means something different to everyone. If you are the one who does the bulk of the cooking at your house you know exactly how you want your kitchen set up for the dirty work you do. Production starts at your prep areas and dialing in this space to meet your needs is crucial to making the chore of cooking and baking an enjoyable experience.

Some people never have enough counter space and need to create what might resemble a food assembly line in order to get the raw ingredients from the fridge to the oven. For this type of person design elements like adequate counter space and appliance location should be areas of emphasis. Other folks love to have every utensil and gadget at their disposal and don't mind getting almost every available dish dirty in the process (this is how my wife describes my cooking style, probably since the person who cooks at our house is generally not the person who ends up doing the dishes).

Admittedly, I fall in this category and for myself I like to have a lot of cabinets in the prep area for easy access to pots, pans, spices, and utensils. My wife and kids enjoy that I have also located the dish washer and a large sink in this area so their task of cleanup is easier after the cooking is finished. Still there are others who tend to spend more time keeping their operation in order with less clutter and spotless surfaces. This work area tends to have a good balance of usable counter space, appliance storage, and space-saving

DESIGN GUIDELINE #5

“IT’S YOUR PREP AREA, MAKE IT WORK FOR YOU”

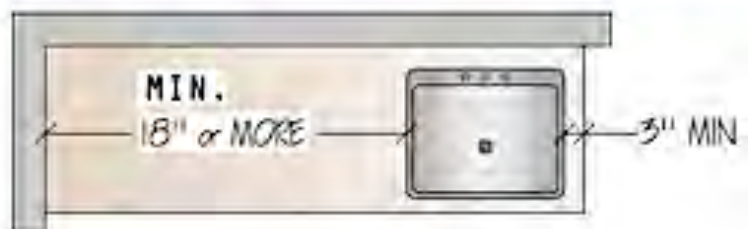
conveniences such as wall mounted magnetic knife bars and multi-bin trash drawers. In the design phase of a new kitchen the input of the person or people who will be in charge of meal preparation should be considered as to provide them with the layout and tools that allow them to do their best work.

The keystone feature in the prep area is the sink. Whether it's the lone kitchen sink or a dedicated sink intended solely for food prep this is the starting line for any meal. The triangle concept (discussed in Design Guideline #2) should be brought into the conversation when laying out the other appliances in relation to the sink. At a minimum the sink itself should be equipped with an adequately sized garbage disposal, however, these days you can also upgrade to a touch-less faucet or an air powered disposal switch to add elegance to the kitchen and efficiency to chef's workload.

Auxiliary Sink

Recommended:

At least 3" (76 mm) of countertop frontage should be provided on one side of the auxiliary sink, and 18" (457 mm) of countertop frontage on the other side, both at the same height as the sink.



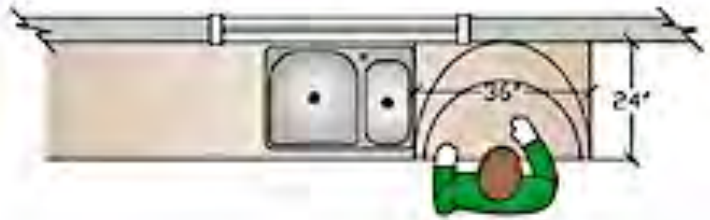
DESIGN GUIDELINE #5

“IT’S YOUR PREP AREA, MAKE IT WORK FOR YOU”

Preparation/Work Area

Recommended:

Include a section of continuous countertop at least 36" wide x 24" deep (914 mm x 610 mm) immediately next to a sink for a primary preparation/work area.



Counter space can often times be overlooked in the design phase. Allowing for what is known as "landing space" is very important when planning out your prep area. If you are considering a kitchen renovation its a good time to look at your current layout. If what you have is not working for you one reason might be the result of an inadequate amount of landing space. In many cases more space can be created by doing something easy such as moving the new sink left or right by as little as 6 inches which can be huge difference to the prep cook. It is important to keep perspective on the fact that the function of your new kitchen is just as important as its aesthetic quality. This approach can certainly help to make your numerous design decisions easier and prove beneficial to those who use the kitchen once it's completed.

DESIGN GUIDELINE #5

“IT’S YOUR PREP AREA, MAKE IT WORK FOR YOU”

Cleanup/Prep Sink Landing Area

Recommended:

Include at least a 24" (610 mm) wide landing area* to one side of the sink and at least an 18" (457 mm) wide landing area on the other side.

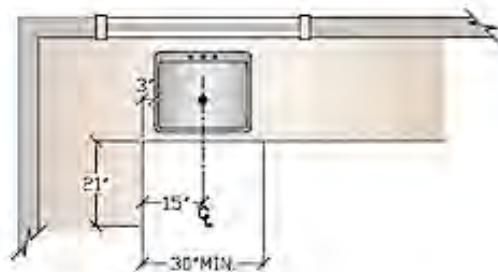
If all of the countertop at the sink is not the same height, then plan a 24" (610 mm) landing area on one side of the sink and 3" (76 mm) of countertop frontage on the other side, both at the same height as the sink.

The 24" (610 mm) of recommended landing area can be met by 3" (76 mm) of countertop frontage from the edge of the sink to the inside corner of the countertop if no more than 21" (533 mm) of countertop frontage is available on the return.

**Landing area is measured as countertop frontage adjacent to a sink and/or an appliance. The countertop must be at least 16" (406 mm) deep and must be 28" to 45" (711 mm to 1143 mm) above the finished floor to qualify.*

Code Requirement:

State or local codes may apply.



DESIGN GUIDELINE #5

“IT’S YOUR PREP AREA, MAKE IT WORK FOR YOU”

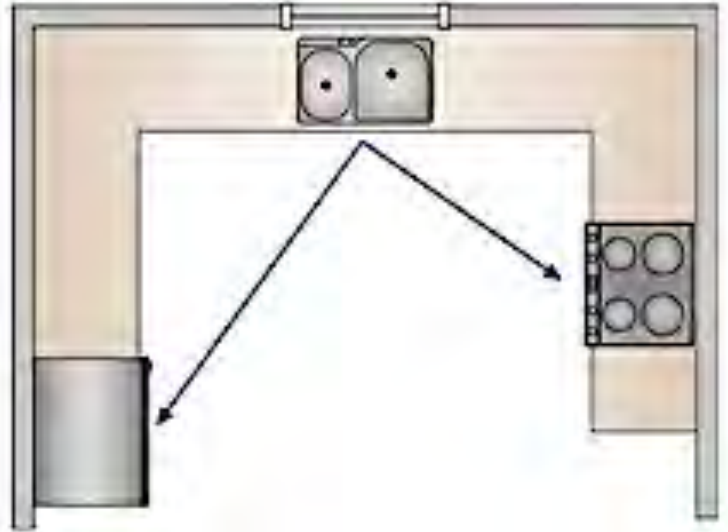
Cleanup/Prep Sink Placement

Recommended:

If a kitchen has only one sink, locate it adjacent to or across from the cooking surface and refrigerator.

Code Requirement:

State or local codes may apply.



DESIGN GUIDELINE #6

“DIRTY DISHES AND GARBAGE: YOUR DREAM KITCHEN WILL CERTAINLY HAVE BOTH”

In previous Guidelines we discussed the concept of the "Work Triangle." When it comes to doing the dishes and cleanup your spouse or kids will certainly appreciate what I call the "Dirty Triangle." This is the close relationship of the sink (hopefully featuring a garbage disposal), garbage receptacles, and the dishwasher. Another component of the this cleanup area is adequate counter space, but not too much otherwise this can become the parking lot for dirty dishes that are left for somebody else to handle. Let's face it- that somebody else usually ends up being you!

Standard building practice has always been to locate the dishwasher within 36" of the cleanup sink (See illustration below). Aside from the obvious convenience aspect to the user both units share common plumbing and electrical terminations that require them to reside in close proximity. The waste receptacle on the other hand has been often times forgotten in the layout of the kitchen. It can be found anywhere from under the sink to across the kitchen to out in the laundry room. In your new kitchen do the entire family a favor and plan to add a pullout waste receptacle. Located within it's own dedicated base cabinet the pullout receptacle typically comes with at least 2 waste bins (1 garbage & 1 recycle). Locate this waste receptacle within the Dirty Triangle. This convenience will keep your cleanup and prep chore a much tidier process. The other

DESIGN GUIDELINE #6

“DIRTY DISHES AND GARBAGE: YOUR DREAM KITCHEN WILL CERTAINLY HAVE BOTH”

Waste Receptacles

Recommended:

Include at least two waste receptacles. Locate one near each of the cleanup/prep sink(s) and a second for recycling either in the kitchen or nearby.

Code Requirement:

State or local codes may apply.

Access Standard

Recommended:

Kitchen guideline recommendation meets Access Standard.



nice feature of the dedicated waste receptacle is that it frees the space under the sink which is already a home to the garbage disposal, plumbing, and various detergents. If you have little ones these cabinet doors will have child locks and that is the last thing you want to encounter with a handful of dirty garbage. If your new kitchen will not be getting new cabinets there are also various after-market hardware assemblies that easily mount in existing cabinets to hold roll-out waste bins.

DESIGN GUIDELINE #6

“DIRTY DISHES AND GARBAGE: YOUR DREAM KITCHEN WILL CERTAINLY HAVE BOTH”

If you are into composting then now is the time to combine this virtuous habit with the inevitable daily drudgery that is kitchen cleanup. You may already have a countertop compost container which are nice but you can always take your composting to the next level by incorporating a built-in compost receptacle within your countertop which includes a lid and bucket below (See previous illustration) . The benefits of this built-in unit is that the compost is placed directly into bin either during meal prep or cleanup saving you counter space. The built in compost receptacle will also decrease the wear and tear on your garbage disposal.

In the cabinet design phase be sure to ask your cabinet designer of about all the bells and whistles that are available such as sink front tip out trays. That sounds like a mouthful, yes, but they are simply a nice place to house your sponges and dish cleaners; out of sight and off the counter. The more you can plan to eliminate clutter and maintain continuity in your Dirty Triangle, the less of a chore the inevitable cleanup process will be for who ever ends up doing the dishes in your new kitchen.

DESIGN GUIDELINE #6

“DIRTY DISHES AND GARBAGE: YOUR DREAM KITCHEN WILL CERTAINLY HAVE BOTH”

Dishwasher Placement

Recommended:

Locate nearest edge of the primary dishwasher within 36" (914 mm) of the nearest edge of a cleanup/prep sink.



Provide at least 21"* (533 mm) of standing space between the edge of the dishwasher and countertop frontage, appliances and/or cabinets, which are placed at a right angle to the dishwasher.



**In a diagonal installation, the 21" (533 mm) is measured from the center of the sink to the edge of the dishwasher door in an open position.*

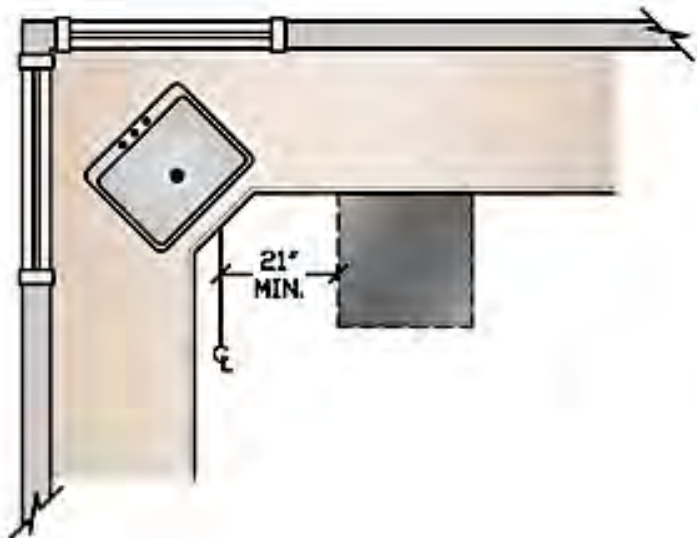
Code Requirement:

State or local codes may apply.

Access Standard

Recommended:

Raise dishwasher 6" to 12" (152 mm to 305 mm) when it



DESIGN GUIDELINE #7

“KITCHEN COUNTERTOPS AREN'T JUST FOR LOOKS”

The crown jewel of any newly remodeled kitchen (aside from the shiny, state of the art appliances) is the countertops. Your new countertop is a unique reflection of your design style. It all starts with the story of how you hand selected your slab or how your tedious research drew you to a new eco-friendly, manmade stone. The reason you chose your particular stone vs. another is a great way to put your personal touch on display in your new kitchen. The countertop in your kitchen, whether its concrete, resin pressed paper, stainless steel, or stone will be a conversation piece for all those you invite in for a tour. In this case “The Dude” (Big Lebowski, 1998) might simply state: That countertop is the rug that really ties the room together.

In order to get the most out of your new countertop however you'll need to take some steps in the design phase to make sure your countertops are not just a “pretty face” but also serves as an adequate landing space for hot dishes, groceries, and corded appliances. For each built-in appliance (refrigerator, oven, microwave, cooktop, etc) you'll want to plan to have at least 15” of countertop width on at least one side (next, above, below, or adjacent to each particular appliance) to serve as a safe landing spot. See the illustrations (below) of various landing scenarios. Far too often practical design gets forgotten and is only realized once you have your hands full with nowhere to easily set your Thanksgiving turkey (true story).

DESIGN GUIDELINE #7

“KITCHEN COUNTERTOPS AREN'T JUST FOR LOOKS”

If the appliance has a side door handle the countertop should be located on the door handle side so you don't have to constantly maneuver around the door with a hot dish in hand. This is particularly true when planning for a side opening oven. Code ICC A117.2009 states that the door latch side should be next to a countertop [1003.12.5.5.2].

If your kitchen will include a cooktop located on an island you will need to plan to have at least 15" on one side and a minimum of 12" on the other. Behind the cooktop you should maintain at least 9" of free countertop space. If you plan to have a seating bar behind the cooktop then you should plan to increase that countertop space closer to 24" to keep a safe distance between your guests and a hot cooktop. Another good idea is to elevate the seating bar above the cooktop counter height, thus separating the work area and the seating bar.

Another countertop trend is to incorporate a built-in butcher block as a portion of the countertop. This is a great feature but be sure to allow adequate space between the combustible butcher block and a cooktop or stove. Always refer to your appliance manufacturer's specifications on allowable clearance prior to designing your kitchen layout. Strategic countertop design will ensure that your countertop not only looks great but functions just as well for all who play a role in your new kitchen.

DESIGN GUIDELINE #7

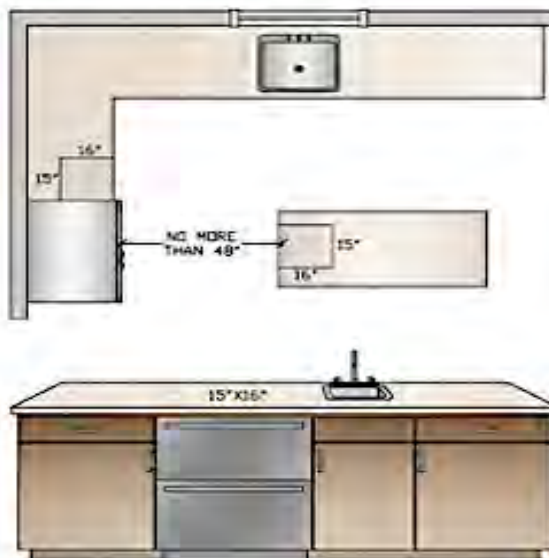
“KITCHEN COUNTERTOPS AREN’T JUST FOR LOOKS”

Refrigerator Landing Area

Recommended:

Include at least:

- 15" (381 mm) of landing area on the handle side of the refrigerator, or
- 15" (381 mm) of landing area on either side of a side-by-side refrigerator, or
- 15" (381 mm) of landing area which is no more than 48" (1219 mm) across from the front of the refrigerator, or



Kitchen Planning Guideline 16 (continued)

- 15" (381 mm) of landing area above or adjacent to any undercounter-style refrigeration appliance.

Code Requirement:

State or local codes may apply.

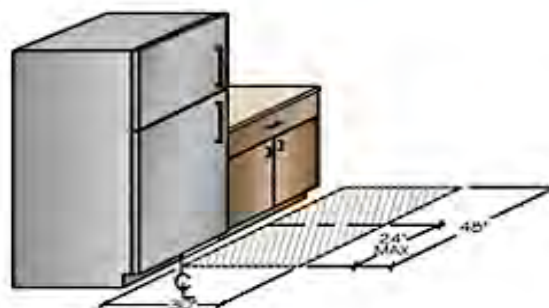
Access Standard

Recommended:

See Code Reference

ICC A117.1-2009 Reference:

- A clear floor space of 30" x 48" (762 mm x 1219 mm) should be positioned for a parallel approach to the refrigerator/freezer with the centerline of the clear floor space offset on the handle side 24" (610 mm) maximum from the centerline of the appliance. (804.6.6, 1003.12.6)



DESIGN GUIDELINE #7

“KITCHEN COUNTERTOPS AREN’T JUST FOR LOOKS”

Microwave Landing Area

Recommended:

Provide at least a 15" (381 mm) landing area above, below, or adjacent to the handle side of a microwave oven.

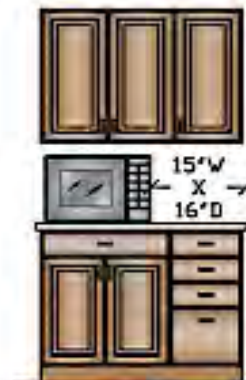
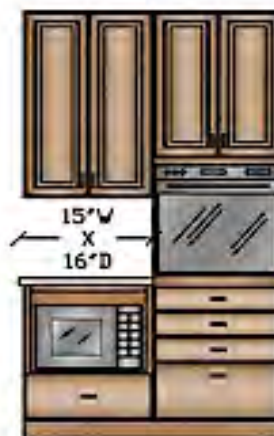
Code Requirement:

State or local codes may apply.

Access Standard

Recommended:

Provide landing area in front of or immediately adjacent to the handle side of the microwave.



DESIGN GUIDELINE #7

“KITCHEN COUNTERTOPS AREN’T JUST FOR LOOKS”

Oven Landing Area

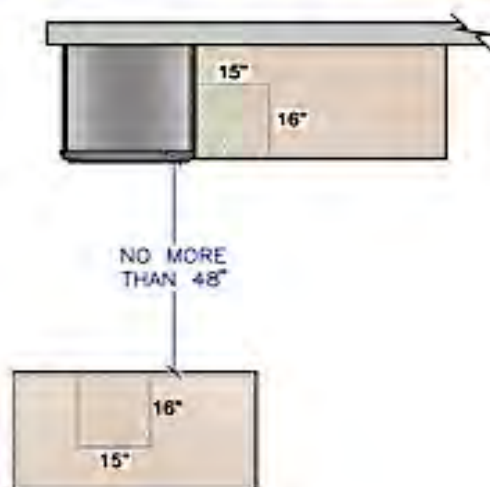
Recommended:

Include at least a 15" (381 mm) landing area next to or above the oven.

At least a 15" (381 mm) landing area that is not more than 48" (1219 mm) across from the oven is acceptable if the appliance does not open into a walkway.

Code Requirement:

State or local codes may apply.



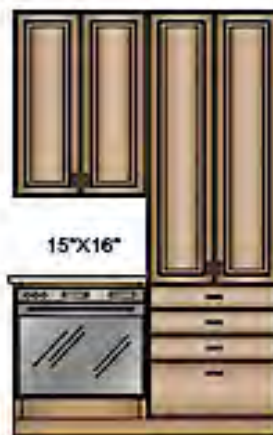
Access Standard

Recommended:

See Code reference.

ICC A117.1-2009 Reference:

- For side-opening ovens, the door latch side should be next to a countertop. (1003.12.5.5.2)



DESIGN GUIDELINE #7

“KITCHEN COUNTERTOPS AREN’T JUST FOR LOOKS”

Combining Landing Areas

Recommended:

If two landing areas are adjacent to one another, determine a new minimum for the two adjoining spaces by taking the longer of the two landing area requirements and adding 12" (305 mm).

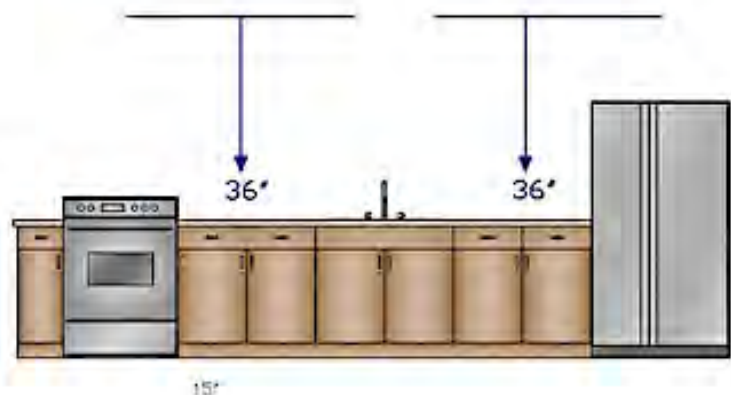
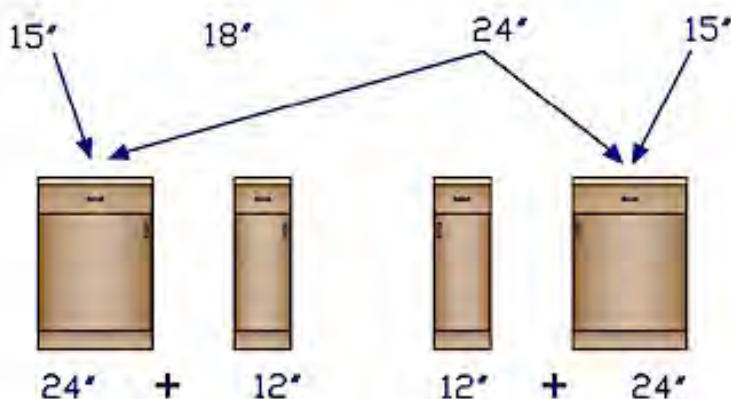
Code Requirement:

State or local codes may apply.

Access Standard

Recommended:

Kitchen guideline recommendation meets Access Standard.

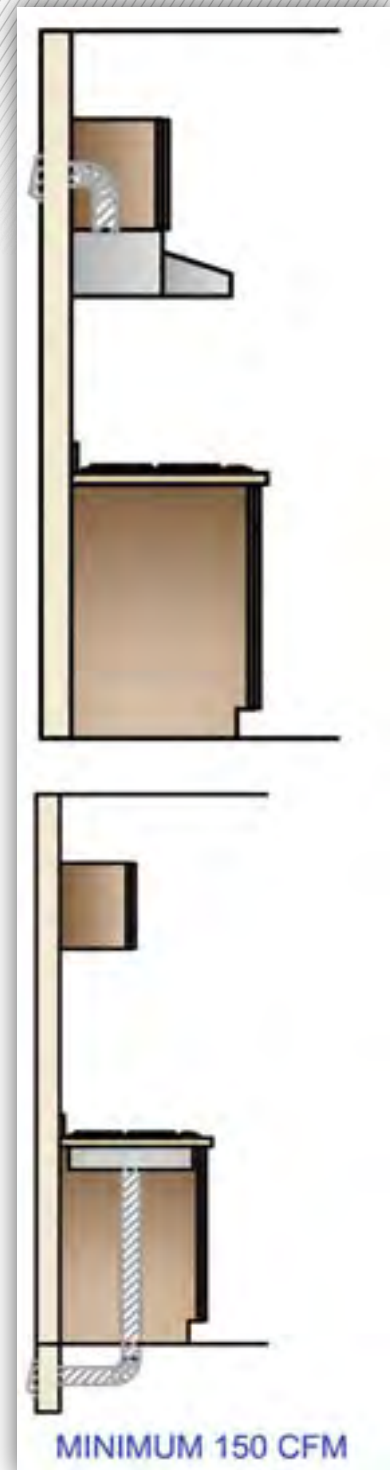


DESIGN GUIDELINE #8

“DON'T PREVENT THE EFFECTIVENESS OF YOUR VENT”

Most people realize the primary function of the vent in a kitchen: to eliminate lingering odor and moisture resulting from each meal cooked on the stove. Unfortunately, not much thought is typically given to the mechanics of such an appliance in the design and procurement phase especially since there are other big ticket items that tend to grab your attention. There are many factors that should be considered when designing a vent system for your new kitchen such as ceiling height, proximity to the exterior of the home, size of cooktop, and allowable space for ducting. If your new kitchen will feature an industrial style Wolf range you will also need to account for how to vent this big boy if all burners are firing at once.

Typically 24" should be the minimum space between a protected surface (non-combustible portion of the vent) above the cooking surface.

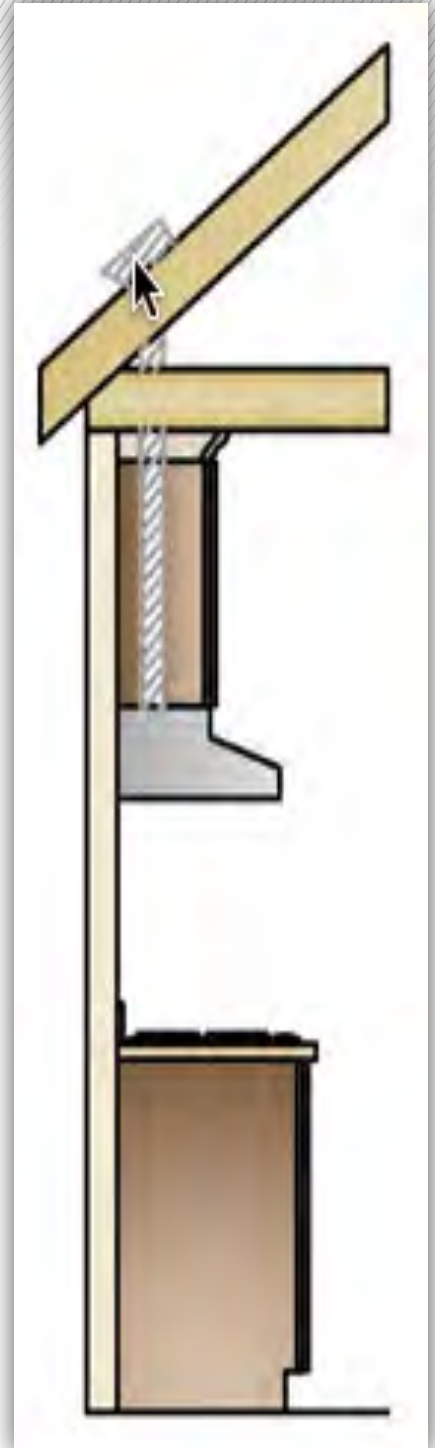


DESIGN GUIDELINE #8

“DON'T PREVENT THE EFFECTIVENESS OF YOUR VENT”

If your vent will have a decorative combustible shroud, at least 30" of clear space should be given. On the other hand you won't want to give too much space between the cook top and the vent otherwise the vent will lose its effectiveness. When doing your research be sure to pay attention to the manufactures specs on cooking surface clearance and the overhead vent. In these specs you will be able to find the “sweet spot” for vent location, both minimum and maximum recommendations for that particular unit.

You'll also be able to get the particulars on all sorts of details such CFM rating and duct sizing tables. Much of this information can be tedious and confusing but it is important to who ever will be installing the unit. Before you decide on a vent you should provide these specs to your HVAC Technician and (or) General Contractor just to make



DESIGN GUIDELINE #8

“DON'T PREVENT THE EFFECTIVENESS OF YOUR VENT”

sure this vent will function as you intend in your new kitchen.

Your contractor will also be able to determine if custom ducting might be needed or if an additional blower should be incorporated if the vent requires an increase in power. He can also make recommendations that you might appreciate later. For instance, if you plan on buying an industrial vent to accompany your heavy duty Sub Zero range you might want to consider locating the blower (motor) away from the kitchen (in a crawl space or attic) so each time it is activated the noise does not drown out the conversation you want to have in the kitchen. Your contractor will also make sure the proper vent accessories are ordered and there is cohesive communication between the subcontractors that will play a part in tying your vent system together.



DESIGN GUIDELINE #8

“DON'T PREVENT THE EFFECTIVENESS OF YOUR VENT”

Cooking Surface Clearance

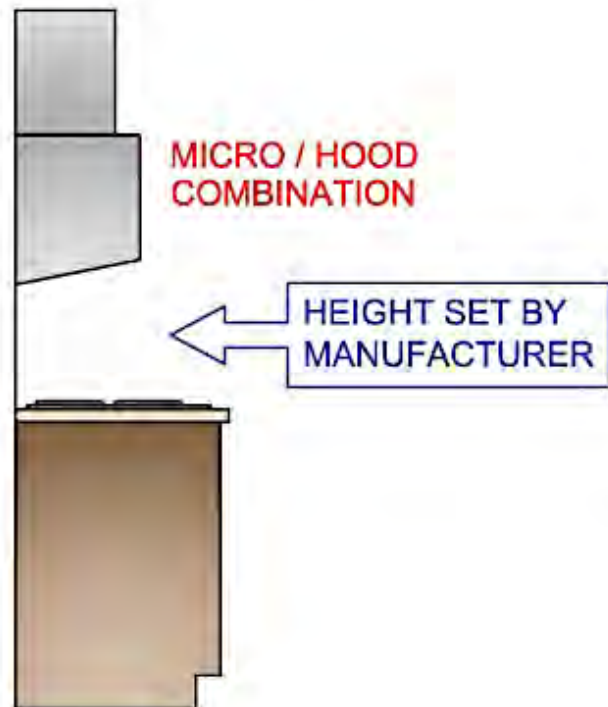
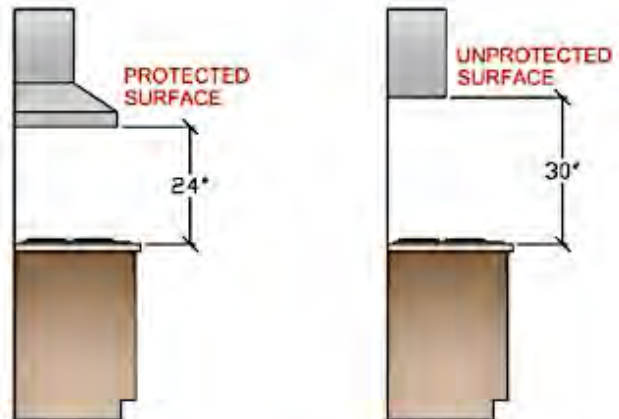
Recommended:

Allow 24" (610 mm) of clearance between the cooking surface and a protected noncombustible surface above it.

Code Requirement:

- At least 30" (762 mm) of clearance is required between the cooking surface and an unprotected/combustible surface above it. (IRC M 1901.1) (IRC G 244705)
- If a microwave/hood combination is used above the cooking surface, then the manufacturer's specifications should be followed. (IRC M 1504.1) (IRC G 2447.5)

Refer to manufacturer's specifications or local building codes for other considerations.



DESIGN GUIDELINE #8

“DON'T PREVENT THE EFFECTIVENESS OF YOUR VENT”

Cooking Surface Ventilation

Recommended:

Provide a correctly sized, ducted ventilation system for all cooking surface appliances. The recommended minimum is 150 cubic feet per minute (cfm).

Code Requirement:

- Manufacturer's installation instructions and specifications must be followed. (IRC G 2407.1, IRC G 2447.1, IRC E 4101.2)
- The minimum required exhaust rate for a ducted hood is 100 cfm and must be ducted to the outside. (IRC M 1507.3)
- Exhaust hood systems capable of exhausting in excess of 400 cfm shall be provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system. (IRC M 1503.4)
- Refer to local codes for more restricted requirements.

Access Standard

Recommended:

Ventilation controls should be placed 15" to 44" (381 mm to 1118 mm) above the floor, operable with minimal effort, easy to read, and with minimal noise pollution. Plan storage of frequently used items 15" to 48" (381 mm to 1219 mm) above the floor.

ICC A117.1-2009 Reference:

- Operable parts should be operable with one hand and not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts should be 5 pounds (2 kg) maximum. (309.4)
- Where a forward or side reach is unobstructed, the high reach should be 48" (1219 mm) maximum, and the low reach should be 15" (381 mm) minimum above the floor. (308.2.1, 308.3.1)
- Where a forward or reach is obstructed by a 20" to 25" (508 mm to 635 mm) deep counter, the high reach should be 44" (1118 mm) maximum. (308.2.2)
- When a side reach is obstructed by a 10" to 24" (254 mm to 610 mm) counter, the high reach should be 46" (1168 mm). (308.3.2)

DESIGN GUIDELINE #9

“THE KITCHEN IS NO PLACE TO HORSE AROUND”

If there is one place that I received constant warnings as a kid (yes, even more than school) it was in the kitchen near a hot stove. You have to understand that at my home growing up playing ball in the house was usually ok as long as we did it in the basement. One winter I practiced throwing my Nerf football into the Christmas tree because it was a big target and it never seemed to drop the ball. BB Guns: they tended to be an indoor toy as well, just ask my brother. Clearly we had a lot of fun growing up but if there was room in the house where things got serious it was the kitchen. Now as a parent of 2 children I have grown to appreciate the lessons my mother handed down. A hot stove is indeed a dangerous location and injuries can happen on or around it even when using extreme caution.

If you are planning for a new kitchen some steps can be taken in the design phase to keep your cooking area up to code and conducive to safety. In the illustrations below you'll see some obvious cook top violations such as locating an operating window or anything combustible directly behind your stove or cooktop. These types of scenarios shouldn't get past the design phase because professionals such as an architect, designer, or general contractor will identify these types of compliance issues. An inspector will also have an eye out for such glaring design flaws.

DESIGN GUIDELINE #9

“THE KITCHEN IS NO PLACE TO HORSE AROUND”

The real safety designs that you'll appreciate once you're shake'n bake'n in your new kitchen will be more subtle. For instance the installation of a pot filler faucet located behind your cooktop will prove to be convenient in how it prevents you from lifting heavy pots from the sink to the stove; reducing the risk of burns, spills, and potential strain to your back. Pot fillers also add a touch of elegance to your backsplash as they are available in various finishes and styles.



Pot Filling Faucet adds elegance & convenience.

DESIGN GUIDELINE #9

“THE KITCHEN IS NO PLACE TO HORSE AROUND”

Other layout details to consider could be how the stove or cooktop is positioned in relation to your available counter space and the other appliances. Safe design would be to allow for a minimum of 15” of counter space on at least one side of the stove. Also, your stove shouldn't reside directly next the refrigerator. Putting these units side-by-side causes the refrigerator to work harder and eliminates a safe landing spot for either appliance. As mentioned in Design Guideline #8, the overhead vent should be installed per the manufacturers specifications as well as your local building code. Avoid locating outlets and switches close to the cooktop as this will help to eliminate the temptation to reach across a hot work space.

If you are in the market for a new stove or cooktop during your renovation you might want to look into a unit that generates heat through induction technology. An induction cooktop is much safer than traditional electrical coil or open flame burners. The surface only generates heat when a pot is placed on top. Induction burners virtually eliminate the risk of burns because the surface returns cool once the pot is lifted off. In the U.S. the leading cause of house fires each year is from stoves left unattended. The induction stovetop also reduces this risk while giving you better control of temperature, an expedited cook time, and lower overall temperatures in the kitchen because the only thing that is heating up during cooking is inside the pot.

DESIGN GUIDELINE #9

“THE KITCHEN IS NO PLACE TO HORSE AROUND”

If you don't decide to purchase a new induction cooktop there are still aftermarket cooktop monitors that your general contractor can install to ensure a safer kitchen. Pioneering Tech offers a product called “Safety-T.” This is a cover that can be installed to each burner and will monitor the temperature and automatically shutoff an unattended burner before it reaches dangerously high temperatures, significantly reducing the risk of a fire. A couple of other trusted manufactures are Stove Guard, which offers fire protection products for all styles of stoves and cooktops and Cook Stop which features products that detect motion around the cooktop and automatically shuts the burners off when it determines someone has left the area unattended. These products can be a great compliment to other common safety devices such as a current smoke detector (new batteries need to be installed at least every 6 months) and a properly rated fire extinguisher located in close proximity to the cooktop.

As someone once said “Safety is a cheap and effective insurance policy.” Just as true my Mother's loose translation of this advise to us kids sounded something like this: “The kitchen is no place to horse around!” Indeed, both statements ring true when it comes to protecting your home and your family. Thanks Mom!

DESIGN GUIDELINE #9

“THE KITCHEN IS NO PLACE TO HORSE AROUND”

Cooking Surface Safety

Recommended:

- Do not locate the cooking surface under an operable window.
- Window treatments above the cooking surface should not use flammable materials.
- A fire extinguisher should be located near the exit of the kitchen away from cooking equipment.
- Commercial cooking appliances are not to be installed in residential kitchens. (IRC M 1901.3) (IRC G 2447.2)

Code Requirement:

State or local codes may apply.

Access Standard

Recommended:

Place fire extinguisher between 15" and 48" (381 mm and 1219 mm) off the finished floor.

Select cooking appliances with the controls located so that there is no need to reach across burners to operate.

(1003.12.5.4.4)



UNACCEPTABLE



ACCEPTABLE

DESIGN GUIDELINE #10

“ALTERNATIVE WAYS TO ADD COUNTERTOP SPACE”

Whether you are planning your dream kitchen remodel or just need to find a few more square feet of available space in your existing kitchen, the countertop is prime real estate. The first place to start in this quest for space is to look for what can be eliminated from the kitchen counter. Does mail, books, bills, flower pots, or even a bulky knife block occupy space on the kitchen counter? If yes, then do yourself a favor and remove whatever it is that is not absolutely necessary to kitchen activity from the counter. Throw it away or find new home for it on a shelf, drawer, or another room of the house. If you need to have small appliances on the counter be sure that you are actually using these particular units each day otherwise put them in a cupboard to free up space. This will also be an opportunity to clean out your cabinets. If it's not gonna have a purpose in the near future give it a toss.

Once you cleared up some of the clutter take an inventory of where you still could use more space. If you need more prep space consider purchasing a cutting board that is designed for use over the sink. Boards such as Cut 'N Catch from Catskill Craftsman allow you to separate what you cut into a plastic insert and easily dispose of what you don't want directly into the garbage disposal below. You can also order after market pullout stones or hardwood cutting boards that install easily under the countertop.

DESIGN GUIDELINE #10

“ALTERNATIVE WAYS TO ADD COUNTERTOP SPACE”

Another creative way to gain counter and storage space is with a multi-use mobile island cart. Many brands are available with various surfaces such as granite, marble, or butcher block. Your general contractor can also build a cart for you to meet your needs and design taste. You can customize your cart with shelves and drawers below, perfect for spices, appliances, and utensils. With caster wheels at the base you can easily maneuver your cart to the desired spot in the kitchen, lock the wheels in place during use, and then stow it out of the way when you are finished. I have also seen these carts used as a temporary island seating when more guest seating is needed. For a kitchen with even less storage space you can purchase foldaway carts that collapse down much like a folding chair and can be brought out only when more counter space is needed.

After market hardware is available to lower and raise appliance platforms from a stored location into position at countertop height with very little effort. One of my favorite appliance shelves is the Rev-A-Shelf “Mixer Lift.” This appliance lift folds under the counter when not in use and then pulls up to counter height when you need access to the appliance. These mechanisms were originally developed as Universal Design applications but can be a benefit to any person who desires better access in the kitchen as well as better storage solutions.

DESIGN GUIDELINE #10

“ALTERNATIVE WAYS TO ADD COUNTERTOP SPACE”

If you are designing a new kitchen layout consider the size and shape of the sink you will be purchasing. Maybe a corner sink would fit with the layout of your kitchen better than a standard rectangular shaped basin. Many appliances now feature pullout shelves to place hot dishes directly on. If you don't see a solution readily available for purchase to meet your countertop needs get creative with your general contractor. If you think a pullout, swing-out, or flip-up shelf would serve you well, the two of you should be able to customize a good solution for your kitchen needs.

Countertop Space

Recommended:

A total of 158" (4013 mm) of countertop frontage, 24" (610 mm) deep, with at least 15" (381 mm) of clearance above, is needed to accommodate all uses, including landing area, preparation/work area, and storage.

Built-in appliance garages extending to the countertop can be counted towards the total



Mixer Lift (Rev-A-Shelf.com)

DESIGN GUIDELINE #10

“ALTERNATIVE WAYS TO ADD COUNTERTOP SPACE”

Kitchen Planning Guideline 25 (continued)

countertop frontage recommendation, but they may interfere with the landing areas.

Code Requirement:

State or local codes may apply.

Access Standard

Recommended:

At least two work-counter heights should be offered in the kitchen, with one 28" to 36" (711 mm to 914 mm) above the finished floor and the other 36" to 45" (914 mm to 1143 mm) above the finished floor.



DESIGN GUIDELINE #11

“GIVE YOUR KITCHEN THE EDGE TO STAY ON TOP”

A decision you'll be faced when purchasing a new countertop is the selection of the edge design. The vast majority of new kitchen countertops that are going homes today are solid surfaces (man-made or natural) such as quartz, granite, soapstone, or marble. The appeal of these surfaces is their durability, beauty, and variety. Just as various as the colors & patterns is the edge details that you can choose.

Granted, deciding on the edge detail of your counter may not be as exciting as picking out the the counter itself, but there are some considerations to make. In the illustration you can see some of the most popular edge styles. The most common of these is the flat edge detail. This option typically does not have an up-charge and is the easiest to clean as it doesn't have ridges to collect grime. Edges that have a bullnose or are rounded have the advantage of being easier on your forearms and elbows than the cove or the ogee edge. This is even more important if some of the counter will be used as bar seating. Edges that are not rounded on the bottom will tend to drip spills onto the floor much more so that those counters with a rounded underside. Tiled surfaces can save you money verses the slab style tops. They are durable and like solid slabs there are numerous varieties of color and texture. Special care must be taken to seal and clean the grout joints of a tiled top especially on the edges of the counters. It is wise that if you choose a tiled countertop in your new kitchen that you have an experienced tile setter do the installation. There are many areas on the counter edge and corners where an experienced setter

DESIGN GUIDELINE #11

“GIVE YOUR KITCHEN THE EDGE TO STAY ON TOP”

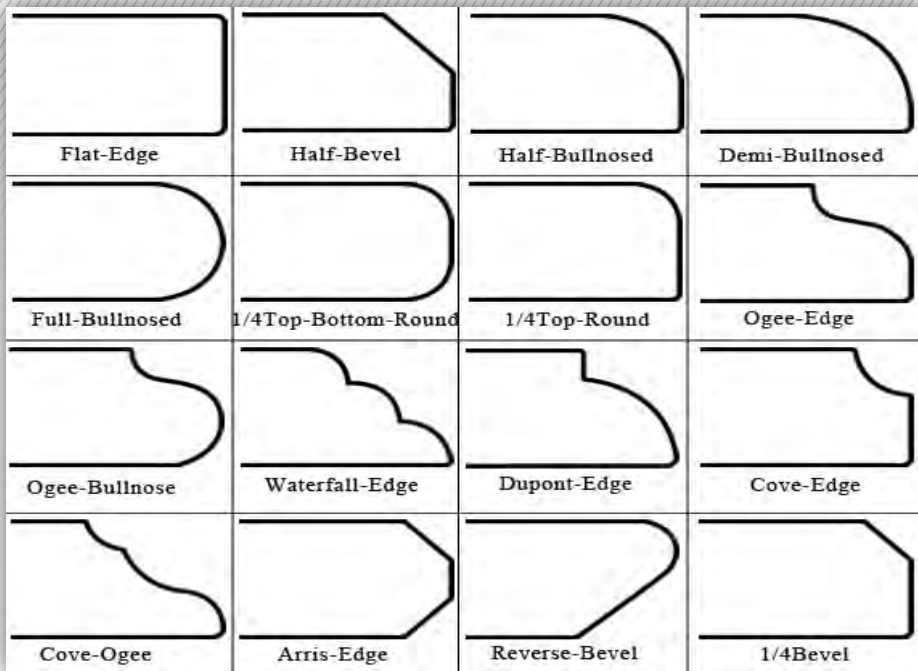
will give you a finished product that does not have sharp corners or uneven edges. Here more so than floor or wall tile you'll want to make sure the surface is as uniform as possible and an eye for detail is very important.

Although plastic laminate countertops do not have the demand that they once did they are still being installed in new kitchens today. The quality and durability of these surfaces are much improved. While the laminate self edge is the most economical option a nice upgrade is to install a hardwood self edge. Species such as oak or maple can be used either with a square edge or bevel. All wood self-edges need to be properly sealed and maintained but tend to handle the wear and tear of kitchen use much better than the laminate alternative.

Regardless of the material, pay attention to any 90 degree counter corners in your kitchen that can be potential safety hazards, especially to the lower heads of young children. This detail comes into play often times on raised bars and large overhangs. In these situations the first 5-6 inches of those corners can be reduced with a 45 degree corner or a radius as seen in the diagram. This a detail that is easier implemented prior to fabrication but can be a real improvement to the flow of traffic in the kitchen. Just like with the countertop itself, the edge detail you go with will be in your kitchen for years to come so give it some extra consideration during the design phase to ensure that your new kitchen gets the right edge to stay on top.

DESIGN GUIDELINE #11

“GIVE YOUR KITCHEN THE EDGE TO STAY ON TOP”



Standard Countertop Edge Options

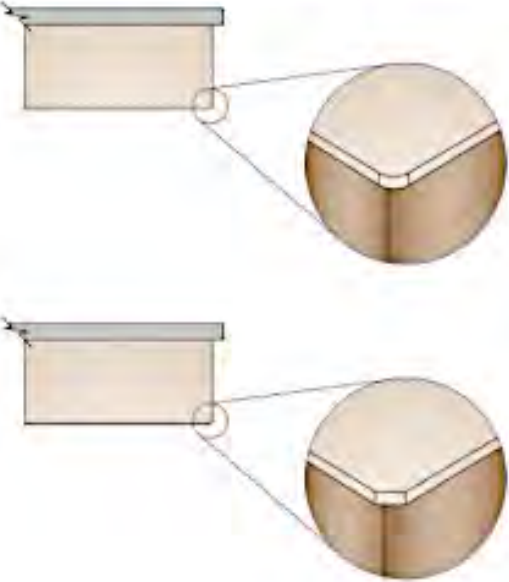
Countertop Edges

Recommended:
Specify clipped or round corners rather than sharp edges on all counters.

Code Requirement:
State or local codes may apply.

Access Standard

Recommended:
Kitchen guideline recommendation meets Access Standard.



DESIGN GUIDELINE #12

“THE IN’S & OUT’S OF CABINET STORAGE”

When consulting with clients about their kitchen renovation among the top reasons they give for wanting (and more so, needing) to renovate their kitchen is to get more storage space. Typically this reason is obvious before the client declares their feelings to us about their disdain for their kitchen. All one needs to do is look around a kitchen that is overflowing with utensils, pot, pans, cleaning supplies, dog food, or even garbage to conclude that storage is a problem that we will set out to fix.

There are many reasons why kitchens get overcrowded and it is typically not due to a hoarding tendency or uncleanliness. In older homes for example, kitchens were not designed to have cabinet space for all of the modern appliances we now enjoy. Cabinets were built on site with large dimension lumber that takes up valuable interior space. Even if the cabinet technically had the space you might find yourself on all fours trying to dig out the turkey pan from a corner cabinet that was only accessible from a door in an adjacent cabinet. Today’s cabinets can be ordered to very exact specifications which allows a designer to maximize the drawer and shelf space of each unit. Much of the hardware that is available on even stock cabinets was not around 30 years ago. The specialty hardware is so convenient and enticing that most customers opt for these add-ons without hesitation.

Earlier I introduced some of the new cabinet storage conveniences such as the mixer shelf and dedicated storage drawers. In this article we’ll take a closer look at the specific cabinet storage

DESIGN GUIDELINE #12

“THE IN’S & OUT’S OF CABINET STORAGE”

equations that you can bring with you to the cabinet designer just to ensure that your new kitchen will accommodate all of your pans, appliances, etc.. In the illustration below you will see the term “shelf/drawer frontage” which is a way designers estimate the storage space of your cabinets. To get shelf/drawer frontage you multiply the cabinet width (x) number of shelves and drawers (x) cabinet depth. With this formula you can see how your current kitchen storage stacks up to the recommended inches for small, medium, and large kitchens.

Storage

Recommended:

The total shelf/drawer frontage* is:

- a. 1400" (35,560 mm) for a small kitchen (less than 150 square feet) (14 m²);
- b. 1700" (43,180 mm) for a medium kitchen (151 to 350 square feet) (14 m² to 32.5 m²);
- c. 2000" (50,800 mm) for a large kitchen (greater than 350 square feet) (32.5 m²).

Shelf/Drawer Frontage In Inches

	Small	Medium	Large
Wall	300"	360"	360"
Base	520"	615"	660"
Drawer	360"	400"	525"
Pantry	180"	230"	310"
Misc.	40"	95"	145"

Shelf/Drawer Frontage In Millimeters

	Small	Medium	Large
Wall	7620 mm	9144 mm	9144 mm
Base	1320 mm	15621 mm	16764 mm
Drawer	9144 mm	10160 mm	13335 mm
Pantry	4572 mm	5842 mm	7874 mm
Misc.	1016 mm	2413 mm	3683 mm

DESIGN GUIDELINE #12

“THE IN’S & OUT’S OF CABINET STORAGE”

The totals for wall, base, drawer, and pantry shelf/drawer frontage can be adjusted upward or downward as long as the recommended total stays the same.

Do not apply more than the recommended amount of storage in the miscellaneous category to meet the total frontage recommendation.

Storage areas that are more than 84" (2134 mm) above the floor must be counted in the miscellaneous category.

**Shelf and drawer frontage is determined by multiplying the cabinet size by the number and depth of the shelves or drawers in the cabinet, using the following formula: Cabinet width in inches x number of shelf and drawers x cabinet depth in feet (or fraction thereof) = Shelf and Drawer Frontage.*

Storage/organizing items can enhance the functional capacity of wall, base, drawer, and pantry storage and should be selected to meet user needs.



DESIGN GUIDELINE #12

“THE IN’S & OUT’S OF CABINET STORAGE”

In the illustration below there are corner cabinets that include a functional option also known as a “Lazy Susan” (sorry Susan). This is a pretty standard feature for today’s corner-base and corner-upper cabinet. One thing to keep in mind is that you can design for a corner cabinet at the end of a straight run (of cabinets) that does not continue on the adjacent perpendicular wall. By adding a corner cabinet in the situation you improve your end cabinet with an increased amount of storage and better access.

Corner Cabinet Storage

Recommended:

At least one corner cabinet should include a functional storage device.

This guideline does not apply if there are no corner cabinets.

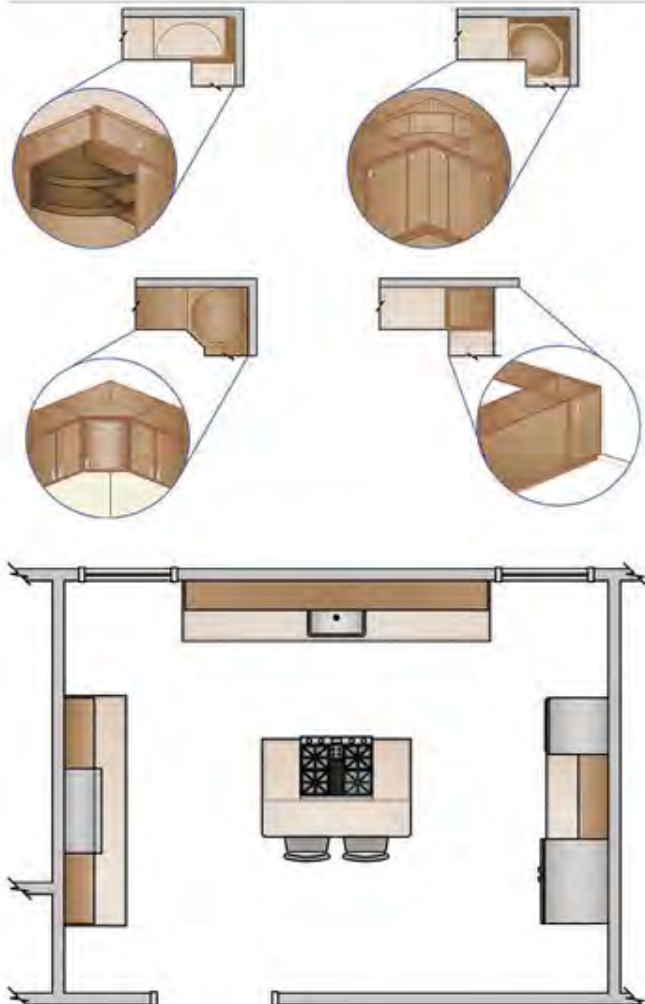
Code Requirement:

State or local codes may apply.

Access Standard

Recommended:

Kitchen guideline recommendation meets Access Standard.



DESIGN GUIDELINE #12

“THE IN’S & OUT’S OF CABINET STORAGE”

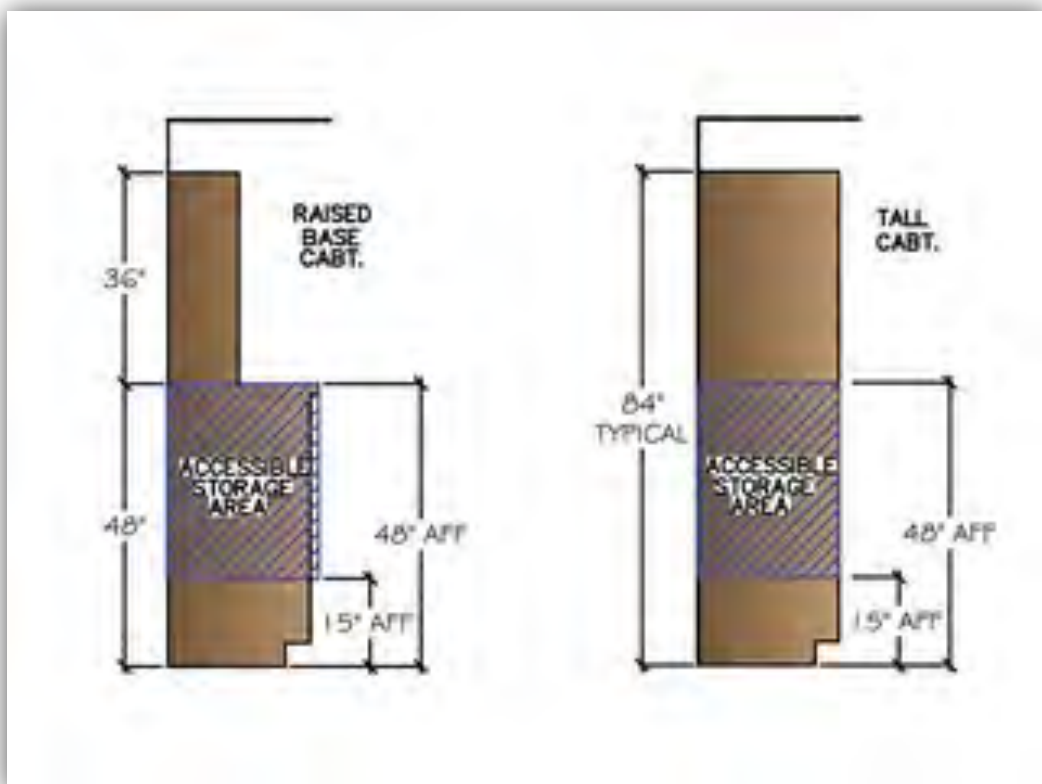


An example of how an upper corner cabinet (with “Lazy Susan”) can be a great way end a long run of cabinets by adding more storage space.

DESIGN GUIDELINE #12

“THE IN’S & OUT’S OF CABINET STORAGE”

Lastly, for the items you access most frequently, they should be stored in a cabinet that ranges in height between 15" -48" off the floor (see diagram below). This improved access will help to keep these items organized and keep you from overexerting yourself. Giving yourself enough cabinet storage is important but some forethought about where you'll store what is the detail that you will congratulate yourself on every time you find yourself operating with ease in your new kitchen.



DESIGN GUIDELINE #13

“WHAT’S SO SPECIAL ABOUT AN ELECTRICAL RECEPTACLE?”

You might ask: “What’s so special about an electrical receptacle?” An outlet: something basic, overlooked, and uninspiring, right? When updating a kitchen, however, more electrical receptacles are almost always required. For example, code may require that there be no more than 24” horizontally between any 2 receptacles located in the counter backsplash. No applicable outlet shall be more than 20” above the countertop. Any surface measuring at least 12” , including an island or peninsula, shall have an accessible outlet. There are also minimum requirements that apply when locating outlets around the sink or cooktop. These are all pretty common standards, however, other state and local building codes may require even more specifics when it comes to outlet location. Verify with your electrician or general contractor with which codes apply to your kitchen remodel.

A good electrician will not only know the rules but will consult the general contractor and or homeowner when there is a specific outlet location discrepancy or there is an esthetic decision to be made. He will also be in communication with the tile setter, countertop fabricator, and any other tradesman who will be affected by where electrical boxes are located. The electrician will also be on-hand when the inspections are conducted and can make reasonable requests to the inspector if specific allowances are needed.

DESIGN GUIDELINE # 13

“WHAT’S SO SPECIAL ABOUT AN ELECTRICAL RECEPTACLE?”

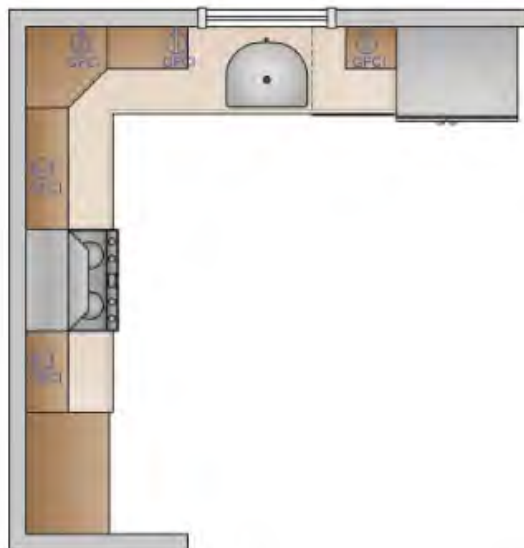
As a remodeling contractor we often hear our customers ask during the design phase: “Do we really need all of these outlets?” Our answer is “yes.” For one reason, the code has been established to eliminate any dangerous situations where cords are stretched across the sink or cooktop. An island needs to have at least 1 outlet (maybe more depending on its size) because it would be unsafe and ridiculous to stretch an extension cord across a walkway to plugin an appliance. In updating your kitchen you also have the chance to properly wire and install GFCI outlets which must be used in all kitchen counter locations to protect users whenever water is present. When you weigh out the cost of a few extra outlets vs. the convenience of always having power nearby it is usually more than enough proof that more outlets are a must in a modern kitchen.

Electrical Receptacles

Code Requirement:

- GFCI (Ground-fault circuit-interrupter) protection is required on all receptacles servicing countertop surfaces within the kitchen. (IRC E 3902.6)

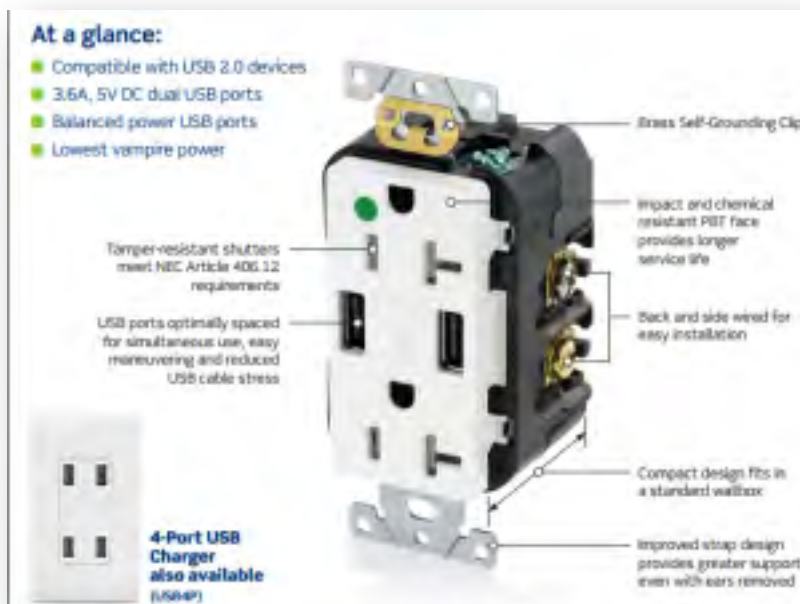
Refer to IRC E 3901.3 through E 3901.4.5 for receptacle placement and locations.



DESIGN GUIDELINE #13

“WHAT’S SO SPECIAL ABOUT AN ELECTRICAL RECEPTACLE?”

When discussing outlets, wiring, and the overall electrical design of the new kitchen we get excited to inform our clients of the many new options that are on the market. There are numerous colors, designs and outlet/cover plate combinations that can be selected to fit the new kitchen style. You can also incorporate multipurpose plugins that offer built-in USB ports such as Leviton’s Multipurpose Outlet seen below . Some homeowners enjoy having their outlets hidden out of sight when not in use. Popup power strips such the “Kitchen Power Grommet” from Doug Mockett & Company (2 photos below) have become extremely popular with remodeling homeowners. The design phase is a good time to also discuss our homeowner’s preference for outlet locations within cabinet panels, back splashes, and even drawers. This is the time when the kitchen canvas is clear and we can suggest locations and implement our customer’s preference for where they foresee needing access to power.



DESIGN GUIDELINE #13

“WHAT’S SO SPECIAL ABOUT AN ELECTRICAL RECEPTACLE?”



Collapsed Kitchen Outlet Grommet



Hidden Island Outlet



Hidden Island Outlet

DESIGN GUIDELINE # 14

“LET THE LIGHT SHINE ON YOUR NEW KITCHEN”

One of the most satisfying phases of any kitchen project is when we come by to take photos of the completed renovation. It is during this time that we can adjust the various lights to create many different mood settings and appearances. This is the beauty of having a great lighting system, the ability to dim and switch lights to fit the room depending on the amount of natural light and needs of the homeowner at the time. This also has to be one of the most intriguing aspects of the new kitchen for our clients as well, it is as if they just opened a new birthday present and can't help to try out each light switch to see what pleasant surprise the next one brings.



Task, Ambient, Accent, & Decorative Light seen above.

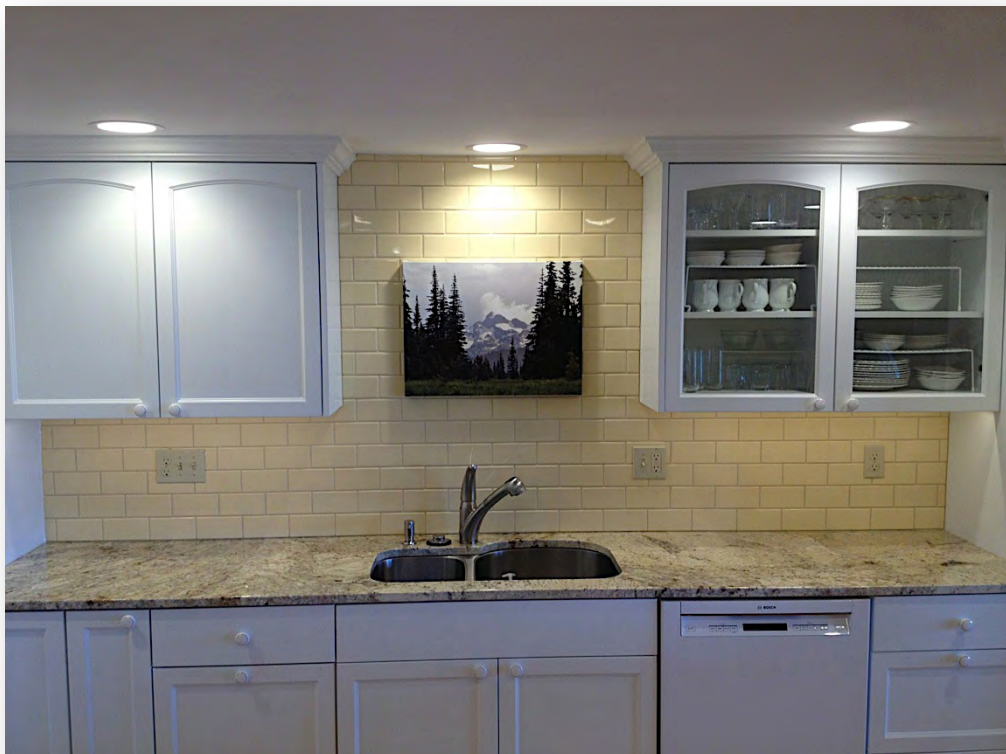
When consulting a homeowner during the design phase I like to break down what we see as 4 major types of lighting that go into creating a smooth lighting layer: task, ambient, accent, and decorative light. Of

DESIGN GUIDELINE #14

“LET THE LIGHT SHINE ON YOUR NEW KITCHEN”

these 4 types of light one particular light can serve more than one purpose especially if the bulb is on a dimmer switch.

Once the cabinet layout has been set we will be able to identify where the work zones are and for these areas there must be adequate task lighting. Task lighting can be achieved by positioning canned lights in the ceiling slightly in front and overhead the person who is opening a cabinet, accessing the oven, or preparing food. The key is to avoid locating the canned light directly overhead or behind the user otherwise they will cast their own shadow in front of the area they need to be able to see. Task lighting can also be achieved with under-



Accent & Task Lighting achieved from canned lights.

DESIGN GUIDELINE #14

“LET THE LIGHT SHINE ON YOUR NEW KITCHEN”

cabinet lighting to illuminate the counter space, track lighting that can be directionally positioned to shine light in specific work areas, or pendant lights that will bring light closer to the work space as seen often times on an island.

A sufficient amount of canned lights in the kitchen will also go to create a flood of ambient light. Ambient light is what softens the room and eliminates the sharp lines and shadows within the kitchen. It's been said that good ambient light will tend to eliminate the wrinkles on the faces of the people in the room. In addition to canned lights, ambient light can also be achieved by from sconces, overhead ceiling fixtures, under-cabinet lights, and any source of natural light. For good ambient light the idea is to avoid having one or few bright spot lights but rather many softer contributing lights.

Accent lights go a long way to bring out the style of the homeowner. Often times they have a piece of art or memorabilia that they want to incorporate into the new kitchen before the even beginning the remodel. For these special items accent lights can be directly positioned to illuminate the focal point. Accent light can also be used inside a cabinet with glass doors to show off the homeowner's collection of china. For kitchens with tall ceilings or decorative beams, up-lighting (from track or sconce lights) can draw one's eye to the detail of the kitchen. Rope light can also be placed under the cabinet toe kick to accent the flooring and cabinets (it also can be dimmed to work as a unique night light).

DESIGN GUIDELINE # 14

“LET THE LIGHT SHINE ON YOUR NEW KITCHEN”



Toe Kick Dimmable Night Lighting

Decorative lighting is what I call the focal lighting attraction in the kitchen, usually achieved by a single chandelier. Decorative light can also be achieved with complimentary colorful sconces or pendant lights. In many cases the homeowner will procure a custom lamp and or shade to bring their style into the new kitchen. A couple reminders for decorative light is that one single chandelier can often times be more expensive than all the other lights combined. Often the homeowner's budget doesn't allow for their dream chandelier at the time of the remodel. If this is the case I still encourage them to plan for the future when someday down the road they might want to add a chandelier. They should still add an electrical box and even an inexpensive fixture so that the wiring is all ready to go when the time is right for an upgrade.

DESIGN GUIDELINE # 14

“LET THE LIGHT SHINE ON YOUR NEW KITCHEN”

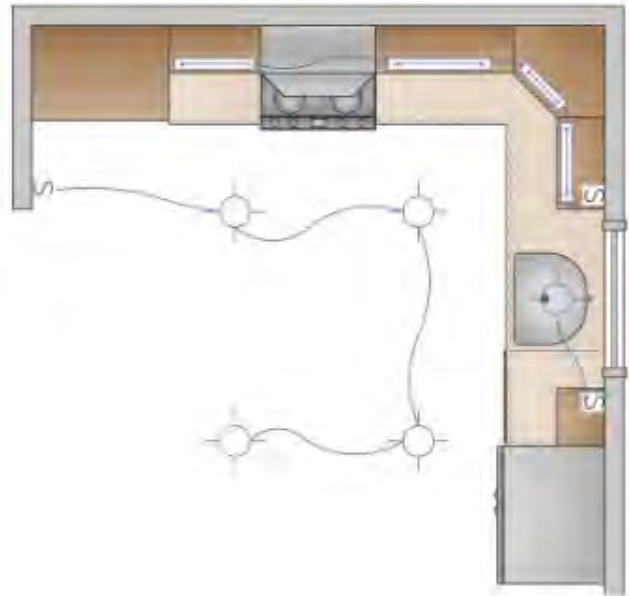
Lighting

Recommended:

In addition to general lighting required by code, every work surface should be well illuminated by appropriate task lighting.

Code Requirement:

- At least one wall switch-controlled light must be provided. Switch must be placed at the entrance. (IRC E 3903.2)
- Window/skylight area, equal to at least 8% of the total square footage of the kitchen, or a total living space that includes a kitchen, is required. (IRC R 303.1, IRC R 303.2)



Access Standard

Recommended:

Lighting should be from multiple sources and adjustable.

ICC A117.1-2009 Reference:

- See Access Standard 19 for reach and control specifications.

DESIGN GUIDELINE #14

“LET THE LIGHT SHINE ON YOUR NEW KITCHEN”

Another tip when it comes to chandeliers is to select one that fits the size of the kitchen. It's one thing to add decorative light but its another when the light starts to look like a alien space ship that's taking over your kitchen. Maintain balance with your chandelier and make sure that the light is not too low as to expose the light bulbs themselves or too high as to not provide enough light. After all, you paid a lot of money for that piece make sure its doing it's job and providing the room with decorative light.



Decorative Stained Glass Light

14 KITCHEN DESIGN GUIDELINES, ILLUSTRATED

All “code” references given within the “14 Kitchen Design Guidelines, Illustrated” are simply examples. Verify with your local building department or general contractor for all code interpretations. Building Codes are constantly changed, updated, and amended. Current Code requirements may differ as they apply to your particular kitchen renovation.



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