

Unit 2: Planning

Block Diagrams and Floor Plans

+ Planning A New Space...Thus Far

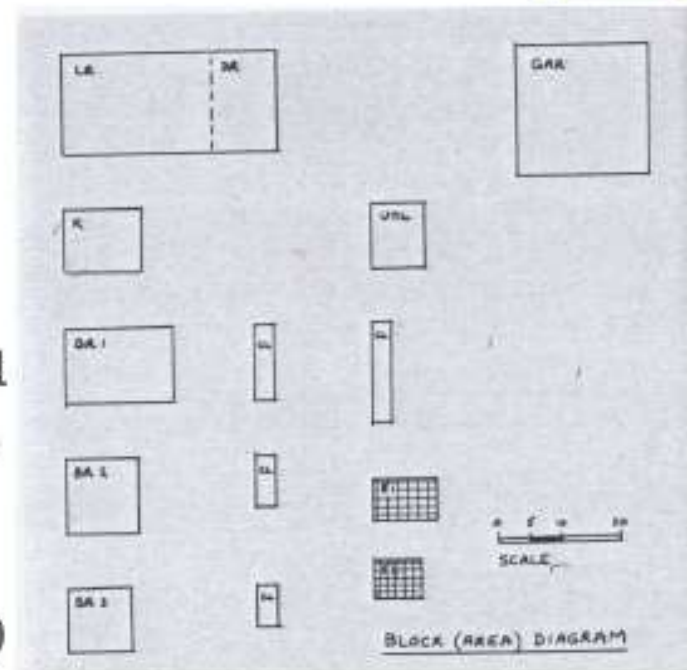


- Program
 - General Project Statement
 - Survey
- Adjacency Study
- Furniture Inventory
- Bubble Diagram
- **Block Diagram**

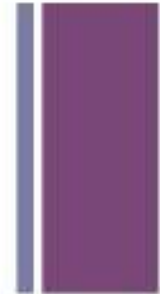
+ Block Diagram

■ Block Diagram:

- To scale
- Rooms do not connect to one another yet
- There is no information beyond the room's name, shape and an accurate measurement of its size in the finished space, drawn to scale (1/4 inch: 1 foot)



+ Block Diagram

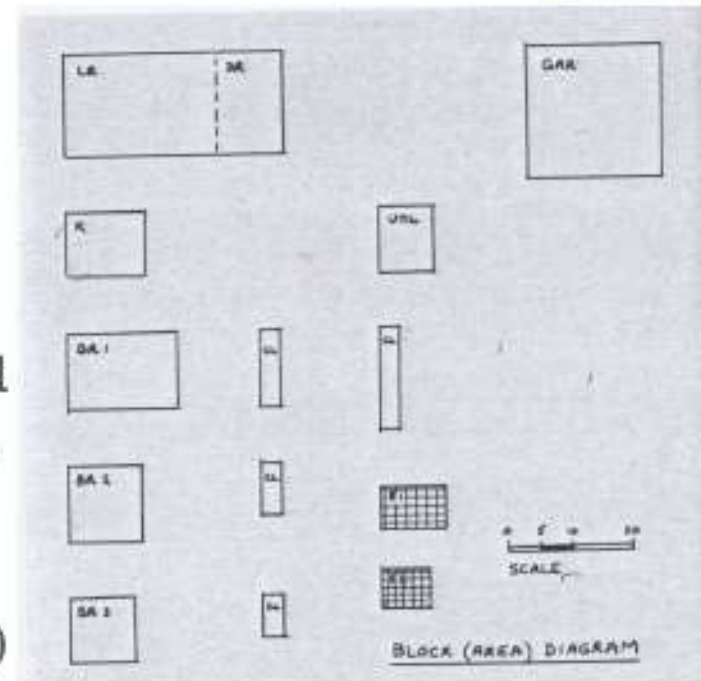


- Have your bubble diagram out to use as an outline
- Use the graph paper for your drawing.
- Title it as *Block Diagram, Project Title, Your Name, Date*
- Use a straight edge to draw each room, separated from one another by a few feet in a $\frac{1}{4}$ inch: 1 foot scale
- Write the scale on the drawing
- Write the name of the room in capitol letters inside of the room
- Calculate the area for each room in square feet, then calculate the total area of the apartment. Write this information on the block diagram
- Don't worry about hallways or stairways yet
- Color if you wish in a clean, easy to read way
- See my example on the next slide and on the blog

+ Block Diagram

■ Block Diagram:

- To scale
- Rooms do not connect to one another yet
- There is no information beyond the room's name, shape and an accurate measurement of its size in the finished space, drawn to scale (1/4 inch: 1 foot)



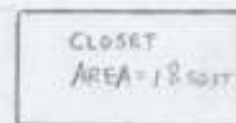
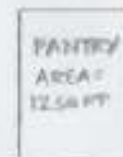
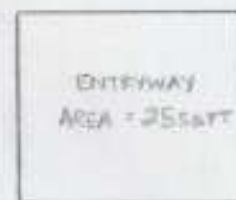
+ Block Diagram



- Have your bubble diagram out to use as an outline
- Use the graph paper for your drawing.
- Title it as *Block Diagram, Project Title, Your Name, Date*
- Use a straight edge to draw each room, separated from one another by a few feet in a $\frac{1}{4}$ inch: 1 foot scale
- Write the scale on the drawing
- Write the name of the room in capitol letters inside of the room
- Calculate the area for each room in square feet, then calculate the total area of the apartment. Write this information on the block diagram
- Don't worry about hallways or stairways yet
- Color if you wish in a clean, easy to read way
- See my example on the next slide and on the blog

BLOCK DIAGRAM
BRIGHT OAKS
CATLIN DECHONDRE
11/8/10

SCALE 1/4" = 1'



TOTAL AREA = 724 SQ. FEET

+ Agenda



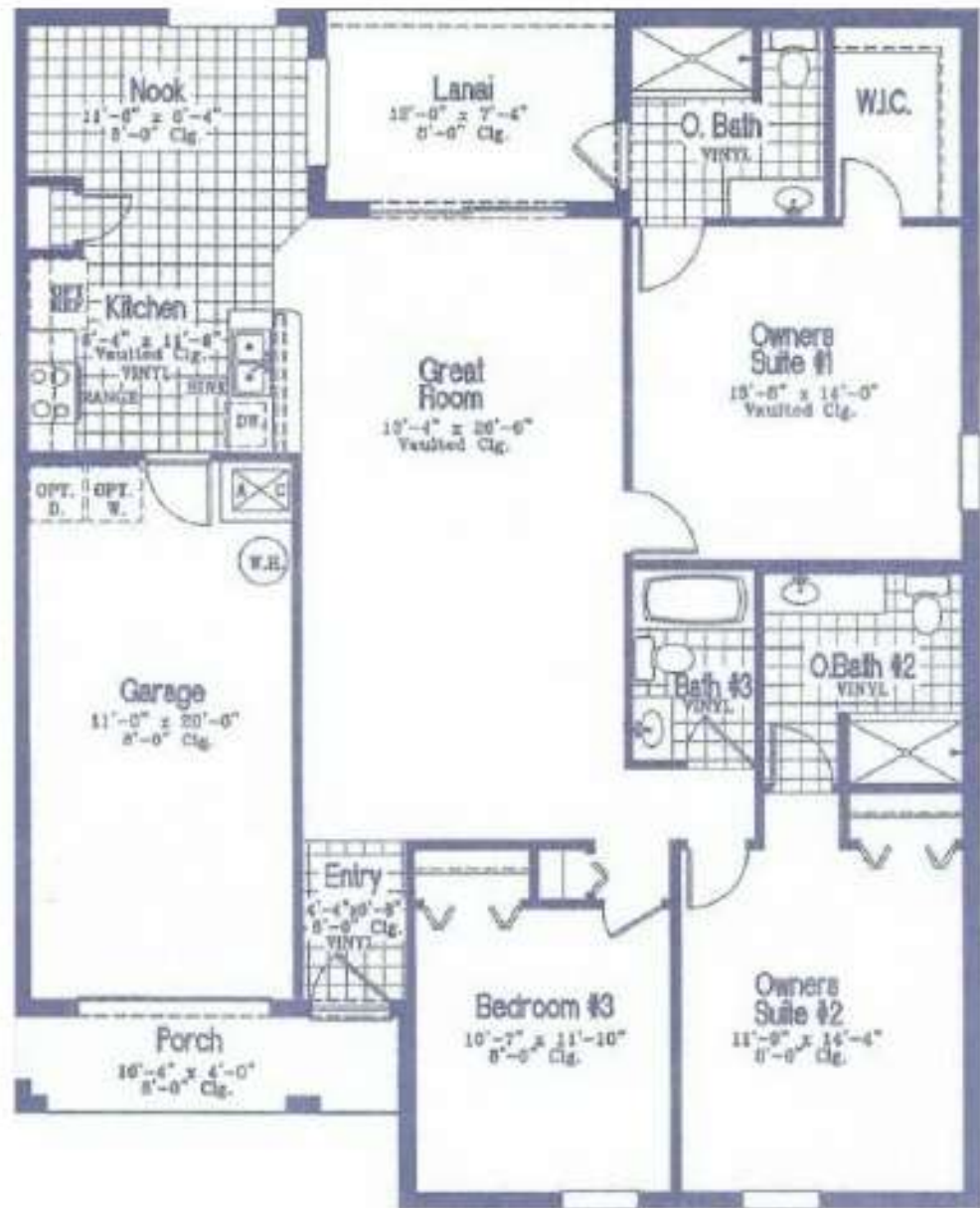
- Tee Shirt Warm Up
- Floor Plans
- Homework – final version block diagram
- Due today – final block diagram and measuring packet
- Window painting? Sign up on the column in between Art Rooms 7 and 8. Meeting on the 30th then window painting when your team decides

+ Planning A New Space...Thus Far



- Program
 - General Project Statement
 - Survey
- Adjacency Study
- Furniture Inventory
- Bubble Diagram
- Block Diagram
- **Floor Plan**

+ What information can we gather from a floor plan?



+ Floor Plans

- Floor Plan – a diagram, usually to scale, shown from overhead, showing the relationships between rooms, spaces and other physical features at one level of a structure

- Information on a Floor Plan

- Interior walls and hallways
- Restrooms
- Windows and doors
- Appliances such as stoves, refrigerators, water heater etc.
- Interior features such as fireplaces, saunas and whirlpools
- The name of the room, purpose of the space
- Dimensions
- Notes for construction
- Symbols for electrical items



+ Getting Started – Floor Plan Draft

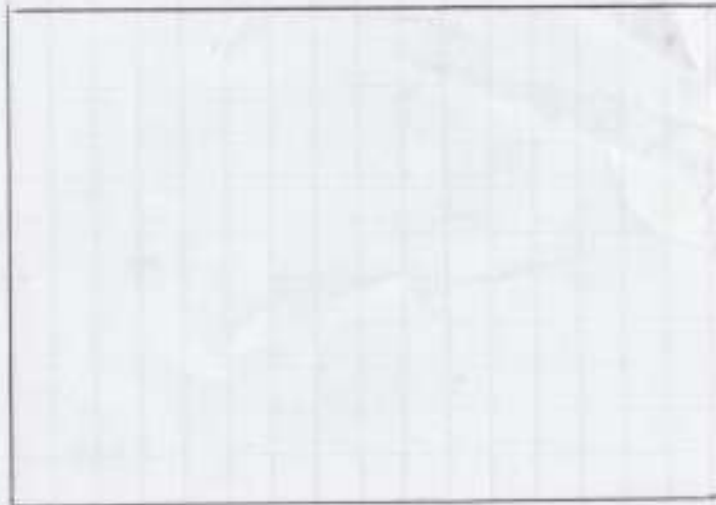


- Start by titling your floor plan
 - Floor Plan
 - Project Title
 - Your Name
 - Date
- Add the scale onto the floor plan (1/4": 1')
- Put your block diagram beside your floor plan paper to make it easy to reference area sizes
- Draw lightly in pencil! You'll be doing a lot of erasing to make room for the doors and windows
- Always use a ruler and compass to make things perfectly precise!
- We're going to start with just one room. Draw **JUST** the walls of the room according to the size given on your block diagram.

+ Floor Plan – Getting Started

FLOOR PLAN
BRIGHT OAKS
CAITLIN BEVENDORF
11/15/10

SCALE $\frac{1}{4}'' = 1'$

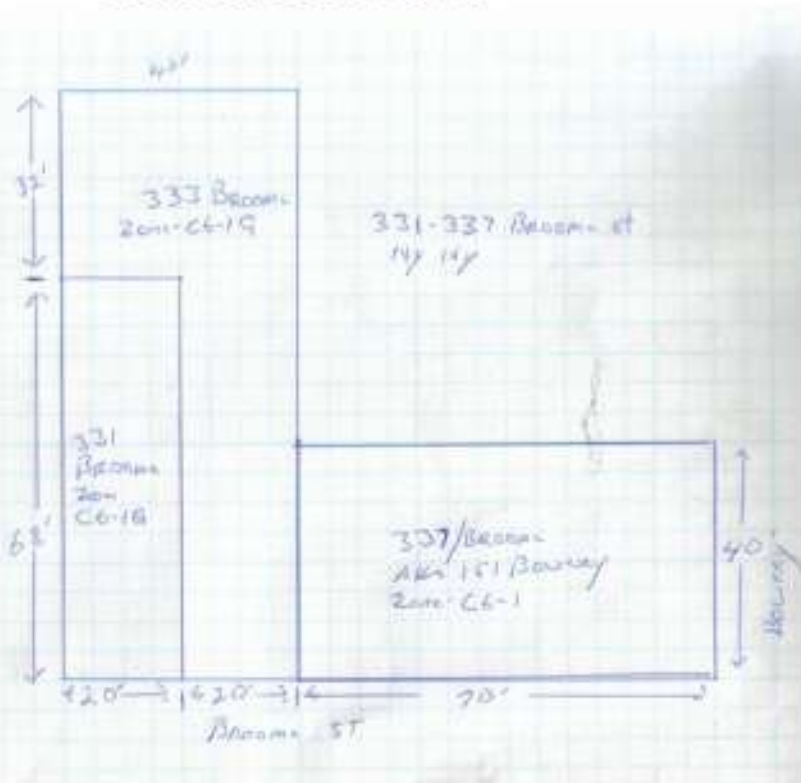


+ Scale and Wall Thickness



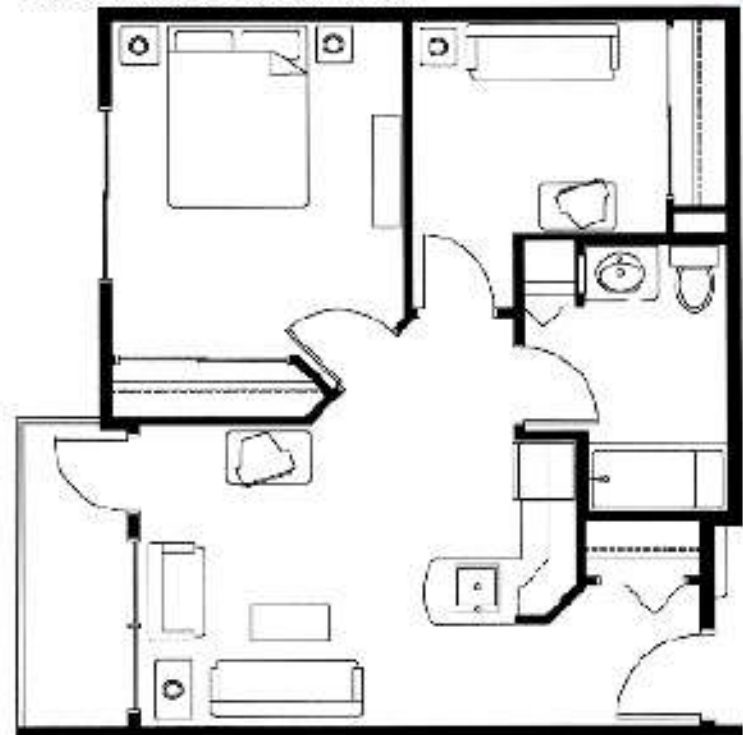
- Our floor plans will be scaled to $\frac{1}{4}$ ": 1'
- Wall thickness vary depending on privacy; sound needs and whether a wall is interior or exterior
 - For our purposes exterior walls will be $\frac{1}{3}$ foot
 - Interior walls will be $\frac{1}{4}$ foot thick

+ Which correctly shows wall thickness?



ONE BEDROOM + DEN

UNIT AREA (EX CLY/INCLD) = 625 SQ. FT. (PLAN NO. PL1)
 Unit Area (Ex clry Includz) = 625 SQ. FT. 55.1 Sq. Ft.



+ Floor Plan – Walls

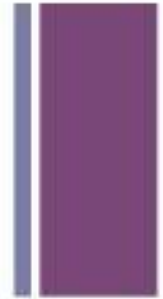
- Interior walls will be $\frac{1}{4}$ ' thick.
- Exterior Walls will be $\frac{1}{3}$ ' thick. Draw these OUTSIDE of your existing line, so it doesn't cut into the area of your apartment
- If it helps to draw walls as single lines first, then go back through and create a thickness later, do so
- Draw lightly as you'll need to erase in the next steps
- While you are drawing, keep thinking about how you'll need to add doors onto rooms
 - Keep in mind swinging room of the door
 - Keep in mind how wide the door will be (around 3' wide)



+ Floor Plans – Walls

FLOOR PLAN
BRIGHT OAKS
CAITLIN DEVEDORF
11/15/10

SCALE 1/4" = 1'

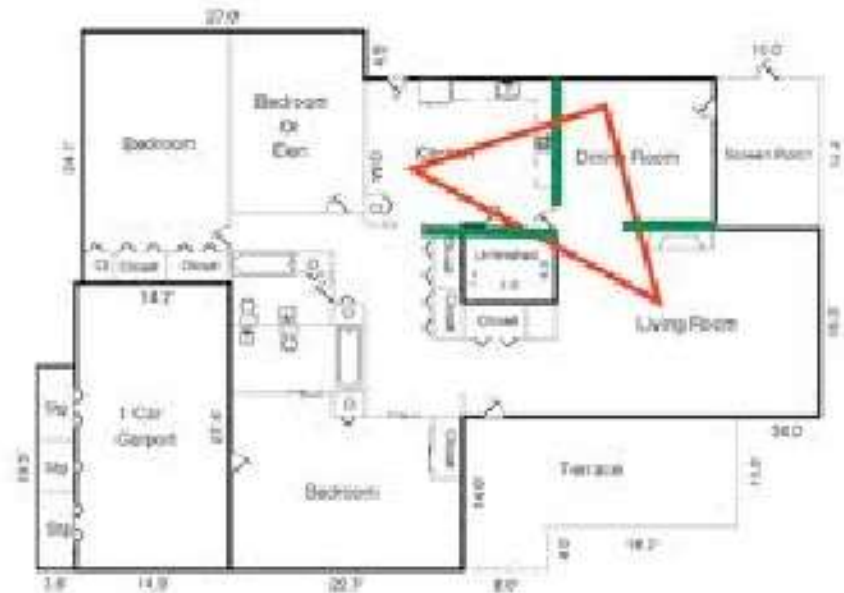


+ Types of Floor Plans



■ Open

- Few dividing walls separating zones
- Spacious
- Flexible for a variety of uses



+ Open Floor Plans



+ Types of Floor Plans

■ Closed

- Walls separate rooms
- Greater privacy
- Greater zone separation

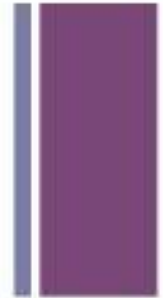


+ Closed Floor Plan

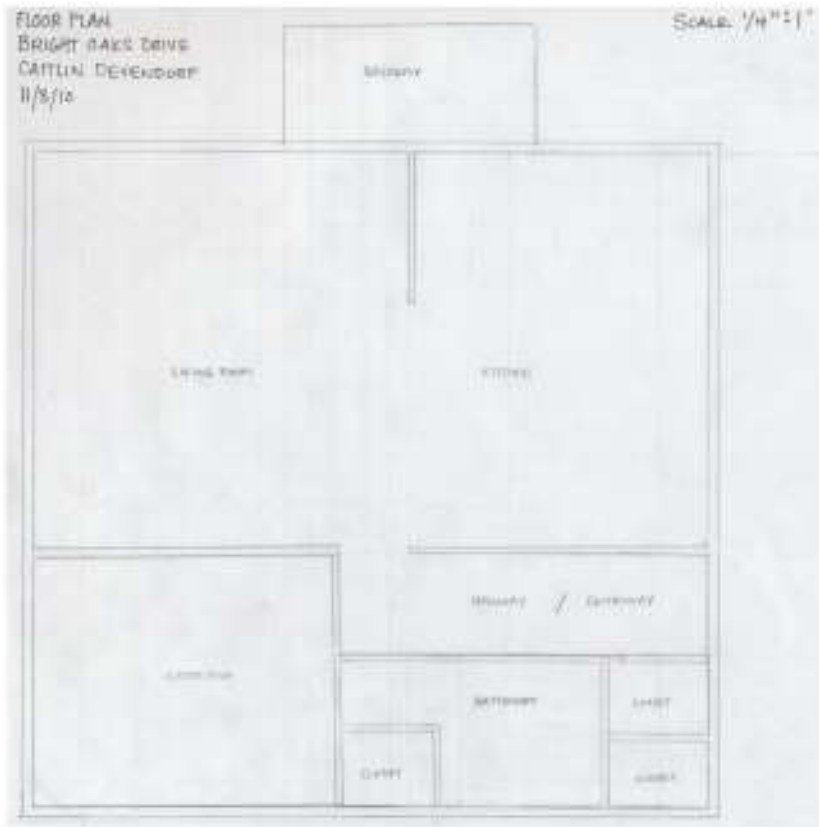


+ Floor Plans - Rooms

- Begin to add in your other rooms – making sure the area of each room is the same as what is on your block diagram
- Keep in mind hallways – how are people going to travel between rooms
 - Hallways should be at a minimum of 3 feet
 - A 5 foot hallway will allow 2 people to pass by one another comfortably
- While you are drawing, keep thinking about how you'll need to add doors onto rooms
 - Keep in mind swinging room of the door
 - Keep in mind how wide the door will be (around 3' wide)



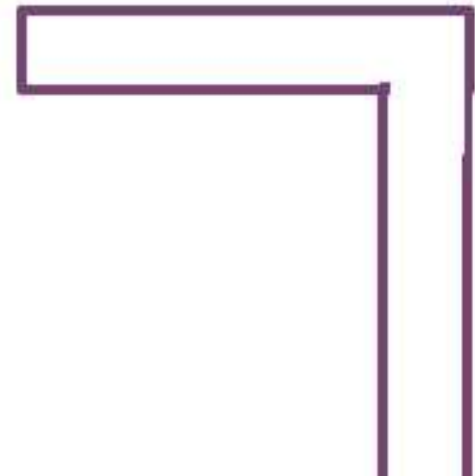
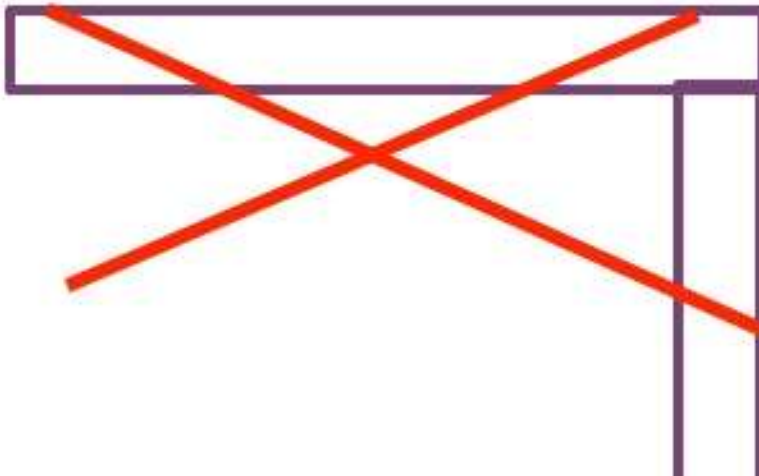
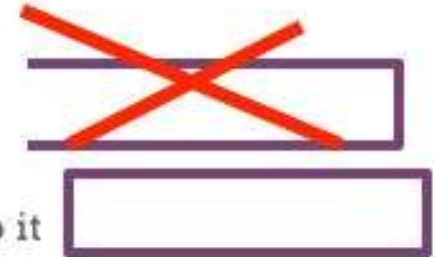
+ Floor Plans - Rooms



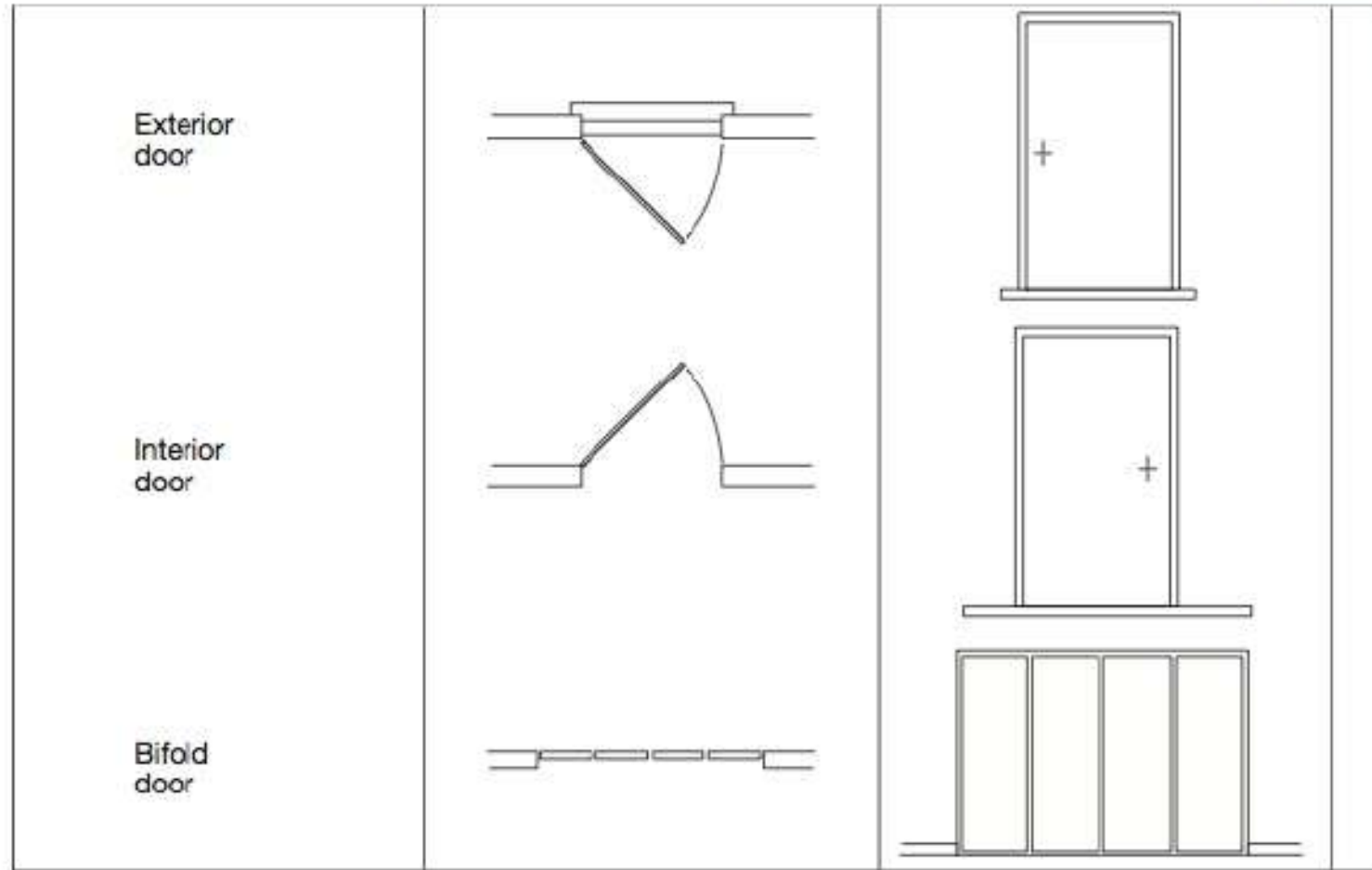
+ Check Yourself



- Double check that all of your walls are the proper thickness
 - 1/3' for Exterior Walls
 - 1/4' for Interior Walls
- Check wall endings and intersections
 - A wall should never just openly end – make sure to cap it
 - Where walls intersect one another there should be no line between them



+ Doors In Your Plan



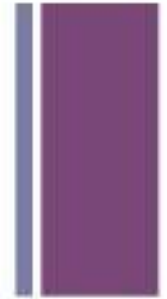
+ Floor Plans – Other Doors

- Refer to your reference handouts for information on other types of doors – sliding; bi-fold; French; pocket; etc.

- Ex: bi-fold doors



+ Floor Plans – Other Doors



- Ex: French doors



+ Floor Plans – Other Doors



- Ex: Sliding Doors



+ Floor Plans – Other Doors



- Ex: Pocket Doors



+ Floor Plan – Doors

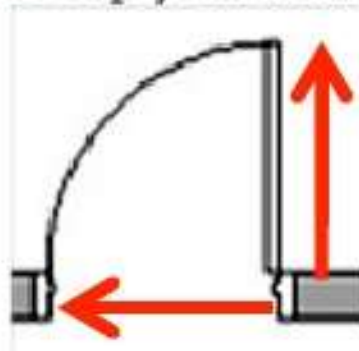


- Using your eraser, erase the area of your walls where your doors will be located
- Don't forget interior doors!
- Keep in mind the sizes of standard doors as you are erasing – exteriors are around 3'; interiors between 2.5' and 3'; bi-folds between 3' and 5'; double doors around 5' to 6'

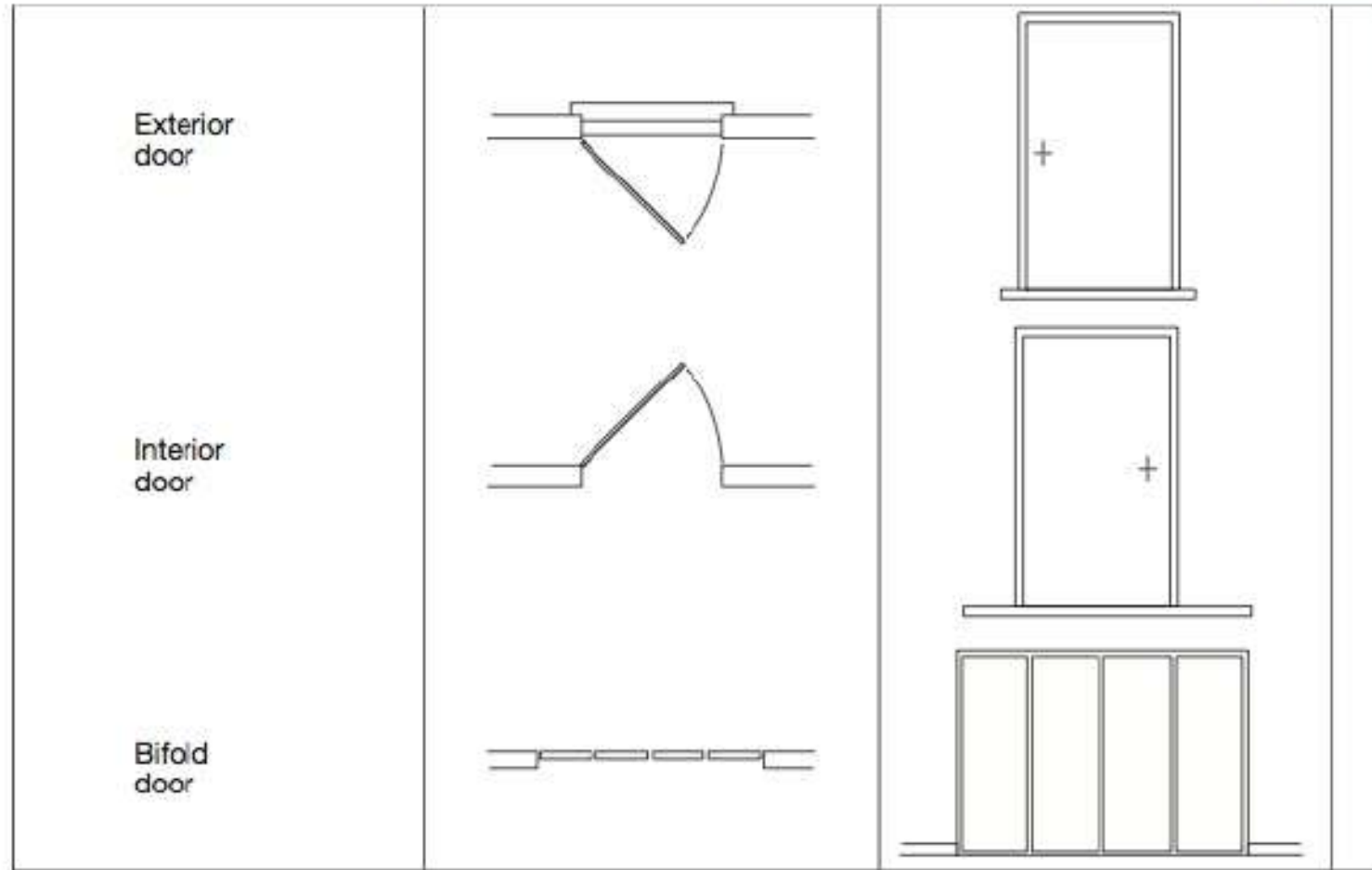
+ Floor Plans – Standard Swing Doors



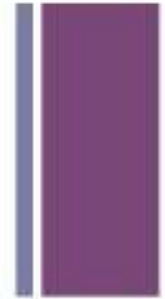
- Add the door symbol to the areas you've left for your doors
- Make sure to draw your arc with a compass and your door with a ruler
- The arc of the door symbol shows which way it swings. Imagine standing in the doorway and pushing/pulling the door according to the arc
- Don't forget to add the door itself.
- Make sure the size of the door equals the opening of the doorway
- Also make sure to cap your walls on either side of your door



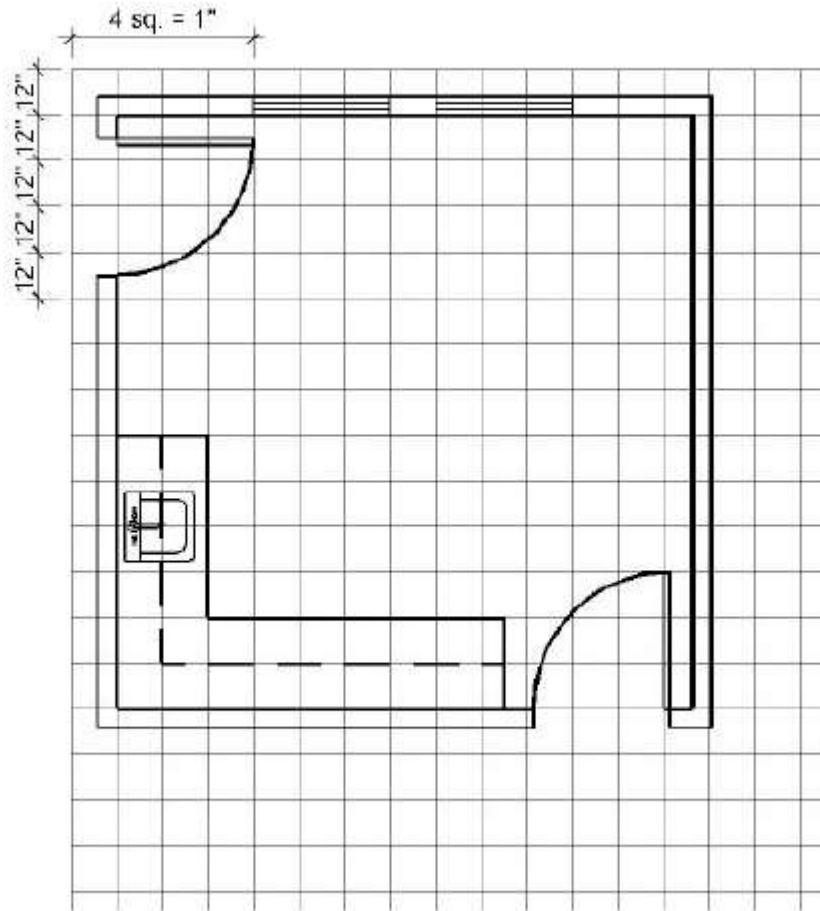
+ Doors In Your Plan




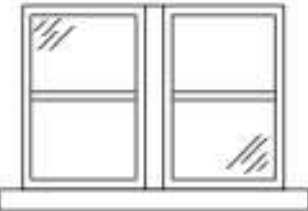
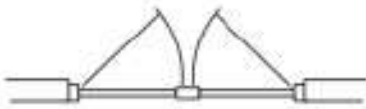
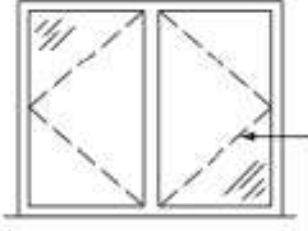

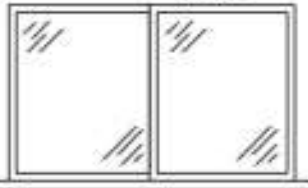
+ Doors in Your Plan



- Standard size – most commonly used size
- Exterior single doors standard- 7'H by 3'W
- Interior single doors standard - 6.67'H by 2.5'W
- Double doors standard - 7'H by 5'W
- Looking for something different? Check out the links on the blog under the menu list on the side called – Floor Plan Resources



+ Windows in Your Plan

Type	Plan	Elevation
Double hung windows		
Casement windows		 <p data-bbox="1420 949 1555 1042">indicates window hinge</p>
Slider		

+ Window Types



Single Hung



Double Hung



Slider



Casement



Awning



Bay



Bow



Garden



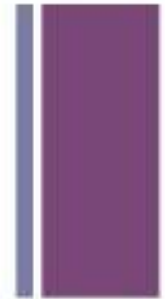
Picture



Hopper



Special Shapes



+ Windows In Your Plan



- Using an eraser, erase the areas where your windows will be
- Most residential windows are standard double hung windows – 3'W or 4'W
- The thickness of the window symbol matches the thickness of the wall



- Windows such as bay and bow windows often require you to structurally move your walls to accommodate the window

+ Designing a Kitchen

- Often called – the most important room in the home
- Center of activity
- Multi-purpose – cooking; baking; dining; socializing; working



+ Kitchen Design Decisions

- Would you like
 - A combined stove/oven (range) unit
 - A separate stove (burners for cooking with pots and pans) and built in wall ovens (1 or 2 wall ovens)
 - A range AND built in wall ovens
 - *** Those that cook/bake often would want double wall ovens



+ Kitchen Design Decisions

- Would you like
 - A single sink
 - A double sink
 - A single sink and a double sink in separate areas in the kitchen – oftentimes a single sink on an island in the center of the kitchen



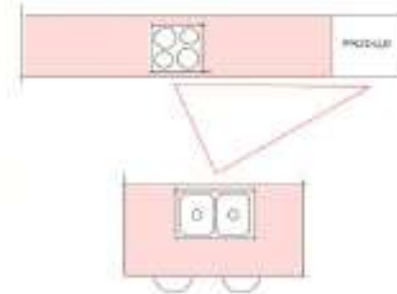
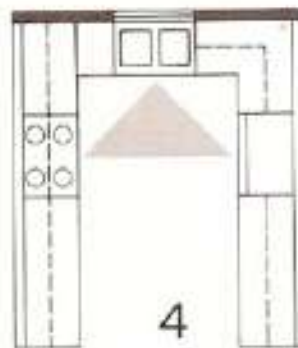
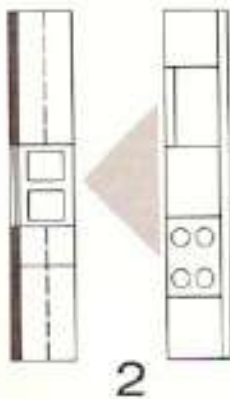
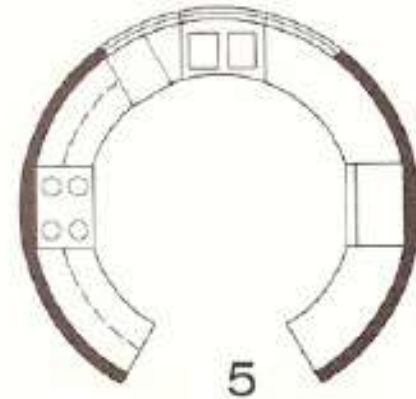
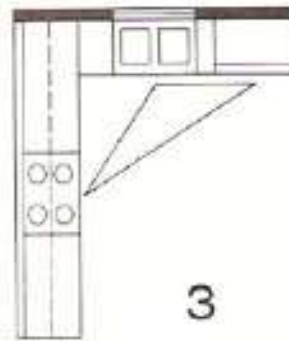
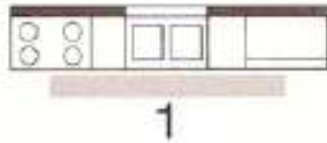
+ Kitchen Design Decisions

- Would you like
 - A dining area in the kitchen?
 - Area for a computer or television?
 - Extra stools/ seating for company?
 - Extra prep room for cooking and baking?



+ Kitchen Design Decisions - Layout

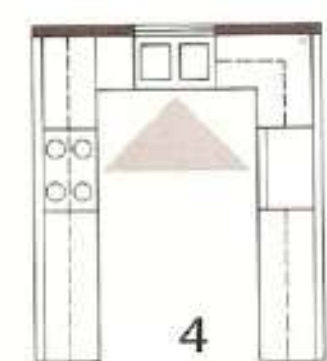
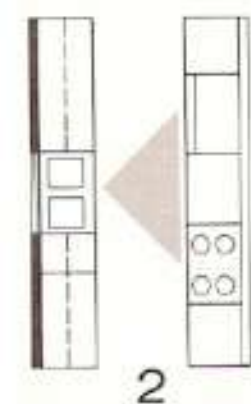
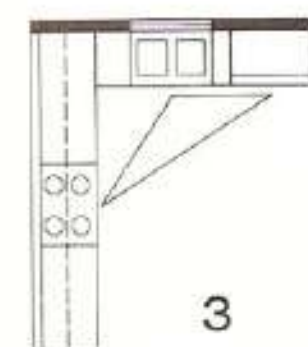
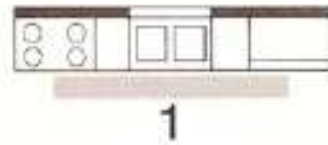
- Common kitchen layouts



+ Designing a Kitchen – the Work Triangle



- The three most important parts of your kitchen
 - Fridge
 - Stove
 - Sink
- Should connect on the ends of a triangle making it easier for circulation and cooking
- Note – this does not apply to the one wall kitchen!



+ One-Wall/Single-Line Kitchen

- *One-wall or Single-line kitchen* is most satisfactory for small open-plan houses and apartments. The work pattern is difficult and tiring in this type of kitchen. Place the sink in the center with the refrigerator and stove at the opposite ends. At least 9 feet of wall space is needed.



+ Galley/Corridor Kitchen

- *Corridor or Galley kitchen* is efficient in terms of space utilization where you can place the maximum counter space in the smallest space. These kitchens are best for long narrow rooms and typical of many apartments. Allow a minimum of 4 feet between facing units for access.



+ L - Kitchen

- *L-shaped kitchen* is adaptable to any interior. It can form an efficient work triangle and diverts traffic to some extent. The sequence of centers should be planned: from storage to clean-up to cooking to service. The open end is used as an eating area



+ U-Shaped Kitchen

- *U-shaped kitchen* is the most efficient and functional of the kitchens plans. It is compact, reduces the number of wasted steps. The center may include any work center.



+ U-Inspired Kitchen





Kitchen – In – The – Round

- *The kitchen-in-the-Round* is similar to the U-shaped kitchen, especially suitable for garden-type or country kitchens. Its main disadvantage is that appliances, usually rectangular, must be custom-fitted into its circular spaces.



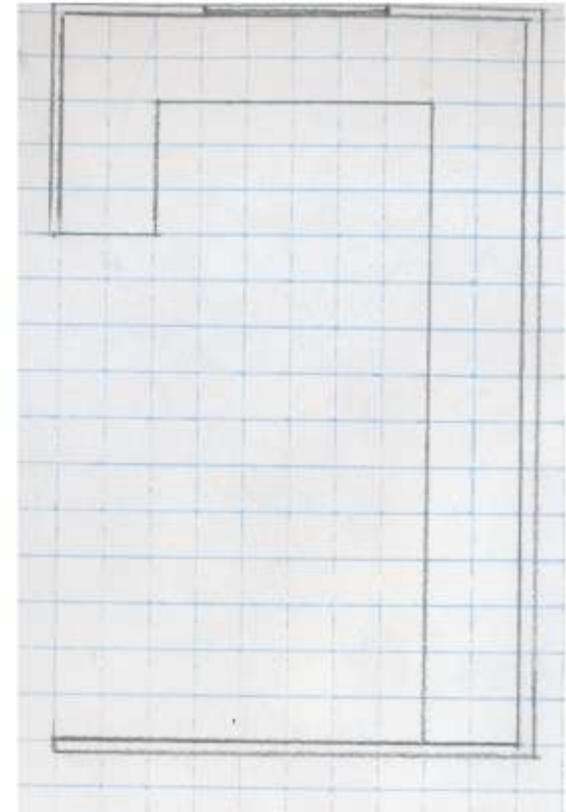
+ Island Kitchen

- *Island layout* groups some of the main kitchen functions at a central workstation; this type of layout requires the most floor area but is ideal for inclusive, sociable kinds of kitchen activity.



+ Starting with your layout

- Lightly create the layout of your kitchen starting with just countertops – be thinking about where your Work Triangle will be – stove; sink; fridge – **DON'T ADD IN THE STOVE; FRIDGE OR SINK YET!!!**
- You'll be replacing some of the counters with your appliances in later steps
- Refer to your reference packet for the standard sizes of countertops
- Keep in mind where your dining area will be!

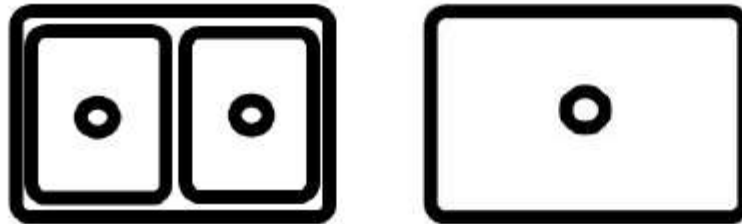


+ Adding the Work Triangle

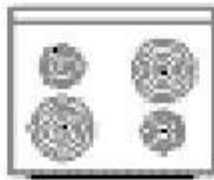


- Now add in your work triangle components – fridge; stove and sink (and any extra wall ovens you may be adding!)
- Refer to your reference tables and the stencils for the proper symbols and sizes

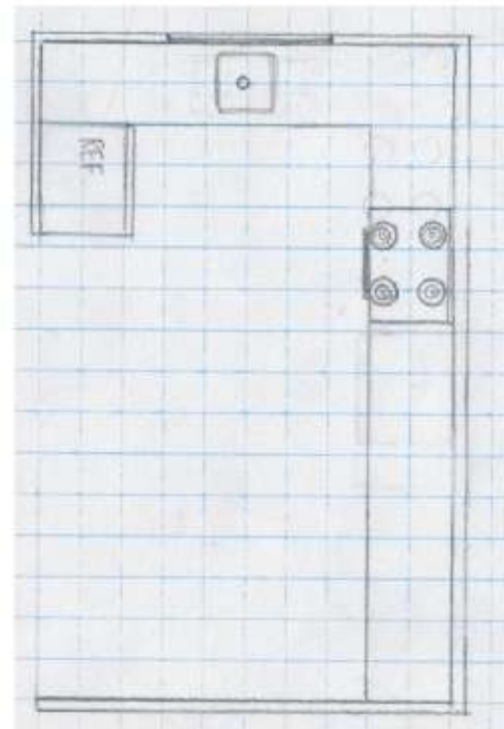
- Sinks



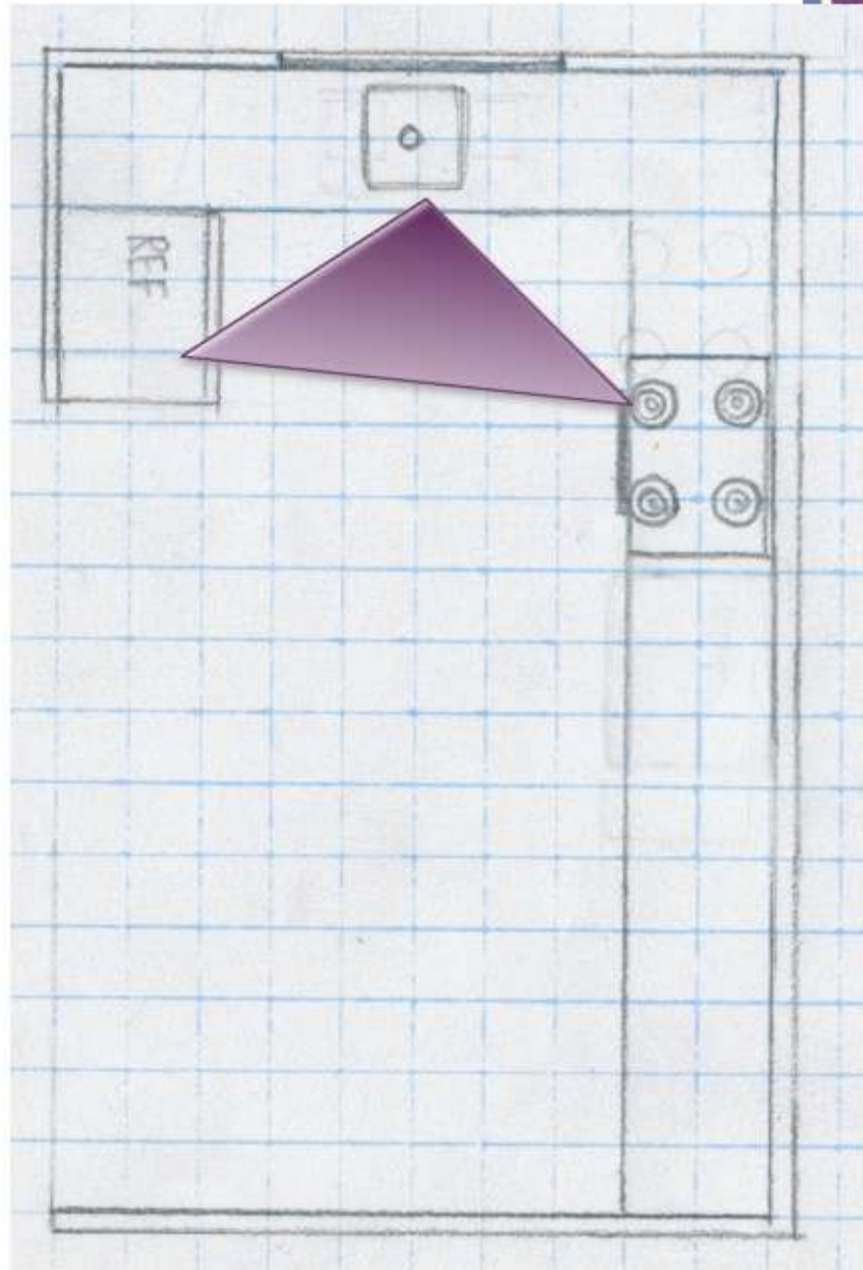
- Stove



- Refrigerator

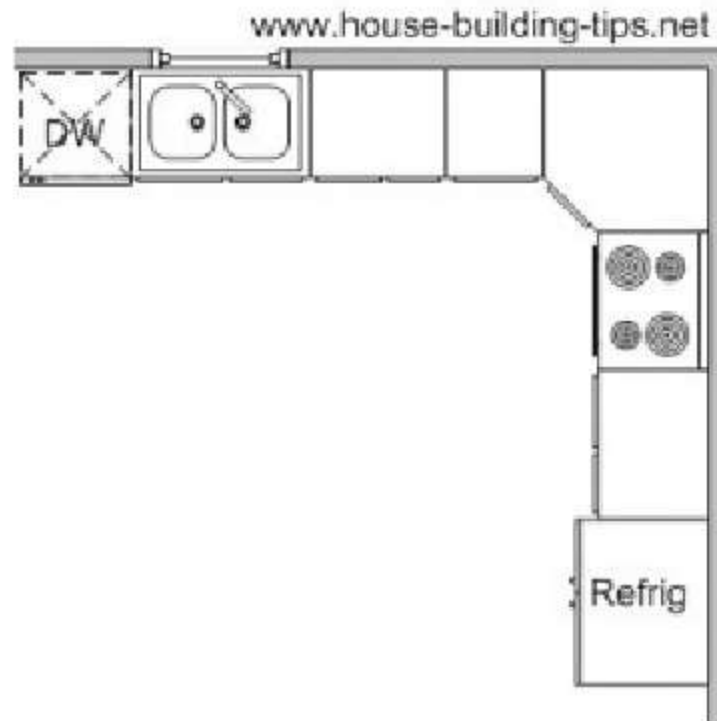


+ Work Triangle



+ Kitchen Cabinets

- Think about where it makes sense to end the kitchen cabinets (meaning where will doors and shelves be)
 - 1 Door
 - 2 Door
 - Open Shelves
 - Corner Cupboards



+ Overhead Kitchen Cabinets

- Drawn similarly to your kitchen countertops but created with a dashed line to show they are above your countertops/appliances
- Depth of overhead cabinets is a few inches less than the countertops



X3. Optional Kitchen Plan

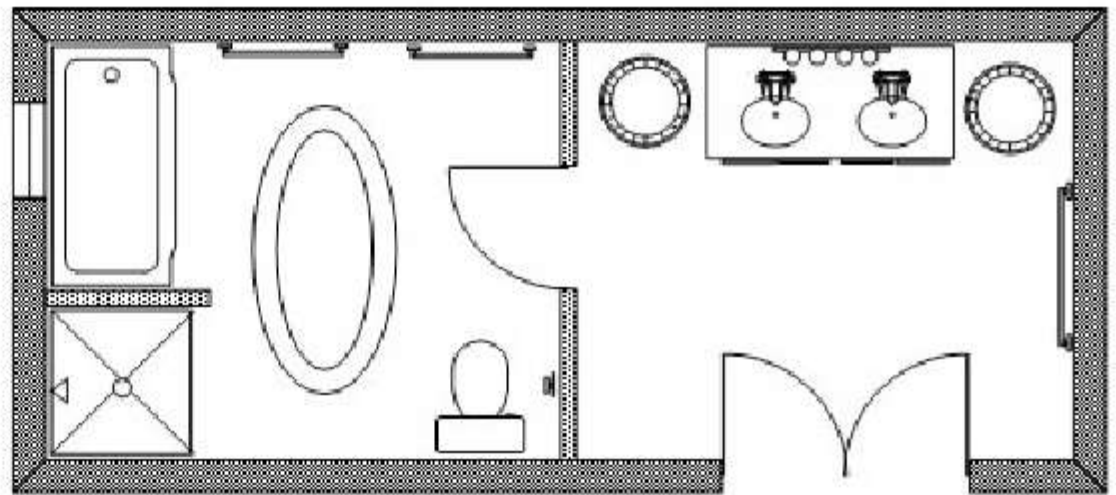
+ Other Appliances

- Add in any other appliances you plan to have in your kitchen
 - Dishwasher
 - Trash Compactor
 - Wine Refrigerator
 - Water Cooler
 - Stand-Alone Freezer
 - Microwaves – mounted overhead is drawn like an overhead cabinet

+ Bathroom Design Decisions

■ Bathroom Zones

- One large room
- Separate room for sinks; toilet or shower
- Keep in mind how much square footage you have!! This may not be feasible!



Bathroom



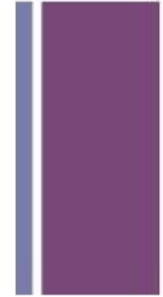
Bathroom Design Decisions



- Shower/ Bathtub Configuration
 - Combined Shower/Tub
 - Separate Shower Stall
 - Separate Tub
 - Bathtub with Shower Option



+ Bathroom Design Decisions



- Sinks
 - 1 or 2 sinks
 - Next to one another or separated in different parts of bathroom



Granite, Sink, and Faucet not included

+ Bathroom Design Decisions

- Vanity or Pedestal Sink (keep storage in mind!)

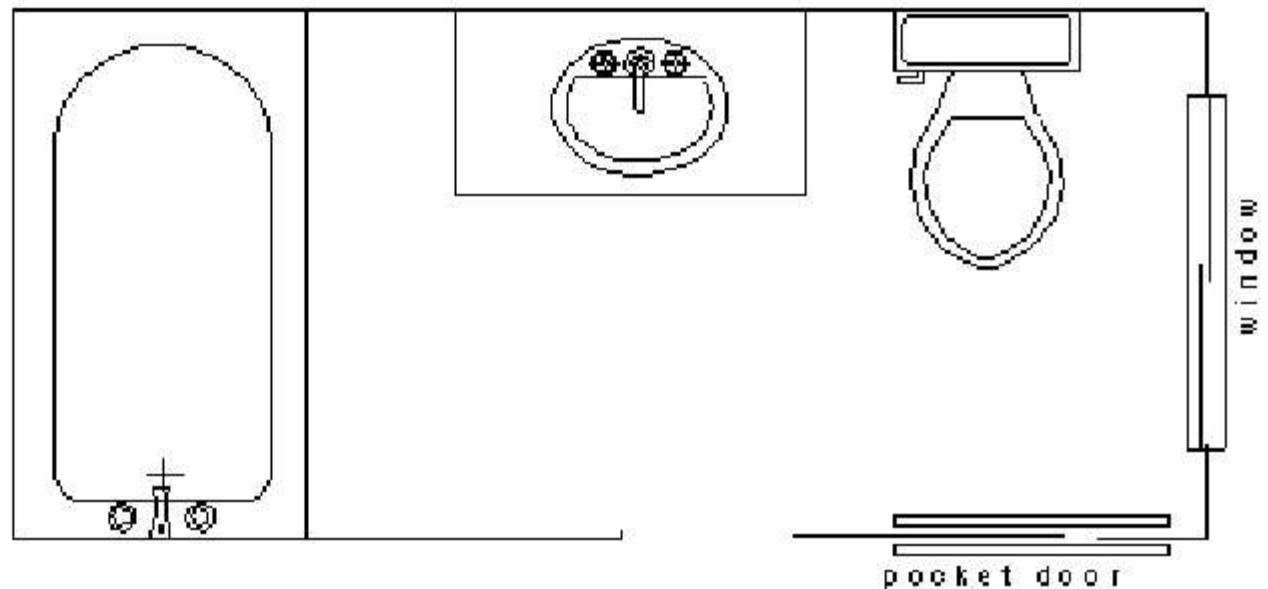


+ Bathroom Rules

- Plan for maximum floor space – areas to towel off and dress
- Avoid placing fixtures – toilets; sinks; showers; bathtubs on exterior walls – makes it difficult/expensive to access pipes if the bathroom is in need of service
- At least 21” to 24” of space in front of sinks
- Provide for storage of bathroom essentials IN the bathroom – towels; toiletries; etc.

+ Designing Your Bathroom

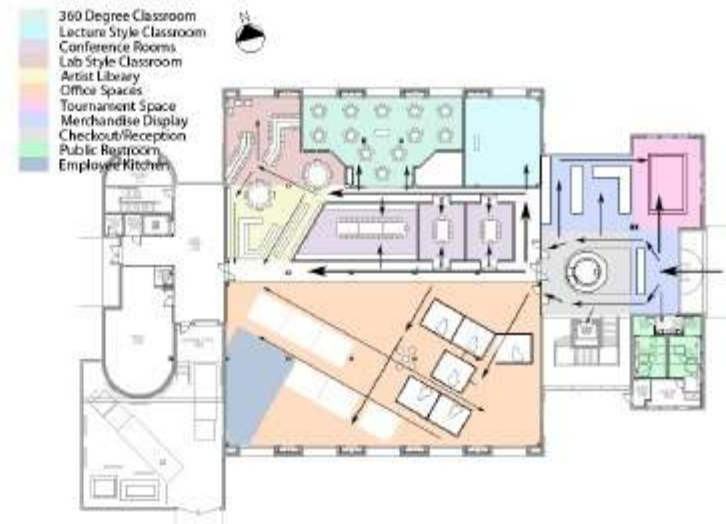
- Add in your toilet; sink; bathtub and shower
- Don't forget storage
- Keep in mind the 21" to 24" rule!



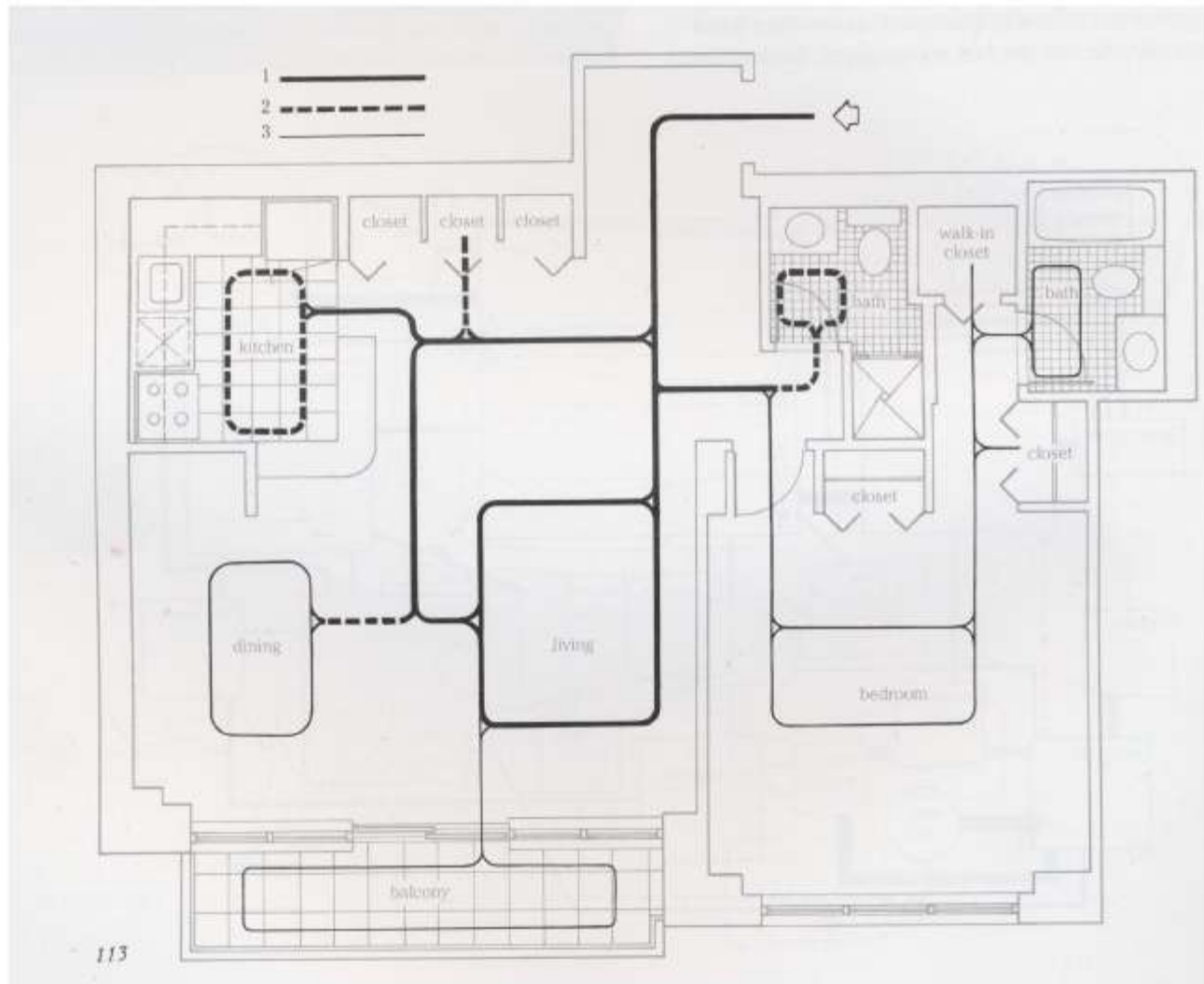


Circulation

- Circulation – movement of a spaces' occupants
- Circulation Diagram – lines drawn to show paths of movement followed most frequently.
 - Thickness of line varies to indicate frequency of movement/number of people expected to follow a particular path
 - Thick Lines = frequently used route
 - Thin Lines = often used route
 - Dashed Lines = rarely used route
 - Good = short, direct routes
 - Problematic = complex routes, confused by winding/contorted paths with bottleneck points of construction (too tight of a space for too many people to pass through)



+ Circulation Diagram



+ Circulation Diagram

- Lay a piece of tracing paper overtop of your entire floor plan
- Using the line system described in your notes, create the circulation lines
- Imagine you live in the space – what are your paths of movement for different activities?
 - Bathroom to Bedroom
 - Kitchen to Dining Room
 - Living Room to Dining Room
 - Pantry to Kitchen
 - And many more!!
- Evaluate if anything needs to be changed to accommodate a better circulation plan

+ Furniture Considerations



- Use your furniture inventory to help you remember what you need in each room
- Key concepts to keep in mind when adding in furniture
- Helpful tips and tricks to use when designing
- For every room keep in mind
 - The client's needs/wants
 - How much room you'll need to move around with the furniture
 - Examples:
 - How far does a chair pull out from a dining room table
 - How much of a swing does a refrigerator door have?

+ Furniture Considerations

■ Living Areas:

- furniture groupings for inviting conversation and entertaining
- seating for people (between 4 and 6, any more people will naturally divide themselves into groups) at suitable distances from one another in comfortable configurations 4 to 10 feet in proximity
- keep in mind music; television; fireplace; windows with a view
- secondary functions as an office; library; computer room

+ Furniture Considerations



■ Dining Areas:

- Tables able to seat minimum and maximum diners
 - circular and oval tables are more informal as there is no head of the table
 - rectangular tables are more formal as there is a head of the table
- Furniture able to be moved to accommodate different numbers of diners
- Other furniture - bars; sideboards; buffets; storage of dishes; extra serving space

+ Furniture Considerations



■ Family Areas:

- Furniture depends on family age and habits
- Televisions; stereos; computers
- Recreation equipment/games
- Bars
- Spaces must be flexible to accommodate growth and different users

+ Furniture Considerations



■ **Bedroom:**

- Bed sizes must be appropriate to users age and sleeping habits
- Space for sitting/reading/dressing/storage/hobbies/office work
- Storage for clothing and belongings
- Allow for growth in children's spaces

+ Furniture Considerations



■ **Non-Residential Space:**

- Consider primary function and items to support it
- Relate furniture layout to fixed elements like doors and windows
- Think of functioning circulation
- Think of how people engage in their everyday activities in the space

+ Mobility Levels

- Mobility – how objects are able to be moved within a space
- Keep in mind when designing the transition of your apartment – are families going to grow; get older; new people moving in?
- Keep in mind for small spaces – high mobility objects will help if you have multi-purpose spaces



+ Mobility Levels

- Mobility – how objects are able to be moved within a space
 - **Fixed Location:** Built-ins (ex: bookshelves, closets) ; impractical to move objects (ex: large cupboards) ; items that cannot be moved due to space constraints (ex: a large bed in a small room)



+ Mobility Levels

- Mobility – how objects are able to be moved within a space
- **Semi-Fixed:** Large/heavy to move objects (ex: sofas, sectionals; large-storage objects; pianos); wall units



+ Mobility Levels

- Mobility – how objects are able to be moved within a space
 - **Moveable:** Re-arranged with ease (ex: chairs, tables, small desks, lounge furniture)



+ Mobility Levels

- Mobility – how objects are able to be moved within a space
 - **Portable:** Furniture that can be stacked; folded; wheel-able. Must consider the storage and typical locations for these items in-use and when not in-use



+ Conflicts in Planning

- The interior designer accepts responsibility for making a vast number of small decisions in which values to be taken into consideration are hardly major enough to be thought about as separate
 - Assign levels of importance to conflicting requirements
 - Which activities take precedence
 - Are there ways to overlap/share activities?
 - Cost – decide which features need to be given up to save money



+ Adding your Furniture



- Keep all that we've talked about in mind today when designing
- Use a combination of furniture from the stencils; your reference packet; the computer AND your own judgment to create your furniture symbols
- Add in all – furniture; plants; large accessories; large rugs and carpets; tile
- You do not need to worry about accessories (small vases; decorative objects); small plants; artwork; small rugs
- A helpful tip – draw your objects using the stencils on separate sheets of graph paper; then cut out and play around with them on your floor plan. Trace around the stencils when you've arrived at the best solution