1. Outdoor Grab Bar
   To install a weatherproof grab bar into a brick wall:
   1. Locate grab bar at the needed height as well as making it plumb (in alignment) with
      level.
   2. Mark the wall where the holes need to be drilled for mounting.
   3. With a cordless drill and masonry drill bit, drill holes as marked.
   4. Using masonry screws attach the grab bar to the wall.
   5. Install grab bar covers. (See pages 23 and 31)

   Tools needed: Cordless drill, masonry bit, level, pencil, masonry screws and 1/4 “ driver for screws.

2. Wireless Doorbell
   To install a wireless doorbell:
   1. Plug in wireless chime in outlet inside your home.
   2. While standing at the door, push the doorbell button to check range before mounting.
   3. Mount doorbell buttons on either front door frame or side door frame or both.
      A. Remove the back of the push button case by pushing in tab on bottom with a
         small screwdriver.
      B. Place the back of the push button onto the door frame in the desired location.
      C. With a cordless drill, secure each screw.
      D. Snap front of push button onto the back.

   Tools needed: Cordless drill, drill bits and Phillips screwdriver.
3. Door Mounted Mail Catcher
The cardboard, broom, papers, and plastic bags on the floor create a slippery and cluttered surface that can lead to a fall. The mail slot does not have a catcher, therefore adding to the cluttered area. By simply placing a mail catcher (Snail Sakk) against the slot, it will prevent papers and mail from being scattered on the floor and also eliminate the draft. The mail catcher is a heavy duty fabric that attaches to the front door. It is easy to install and durable.

To install:
1. Peel the plastic off of one adhesive interlocking strip, which is included in the product.
2. The two strips of interlocking nylon, like Velcro, should be placed 3.75 inches apart.
3. Place the first strip horizontal, slightly above the mail slot.
4. The second strip is placed horizontally below the mail slot.
5. Attach the interlocking nylon strip on the fabric to the matching interlocking nylon strip on the door.
6. This mail catcher comes with a mini ruler that doubles as a mail opener and magnifier.
7. To retrieve your mail you can slide your mail through the side slots or pull down the top corner of the fabric.

4. Lighting using X10 product (X10 is a name of smart home products)
To provide lighting throughout the house, X10 motion sensor lights can be installed to automatically turn on and off lights when walking room to room. In addition, lights can be turned on and off using a remote control, as described below.

To install the X10 remote controlled light:
1. Set the code on the transmitter. (e.g. 1A).
2. Set the remote control to the same code as the transmitter (1A).
3. Plug the lamp into the bottom of the transmitter.
4. Plug the transmitter into the wall outlet.
5. Turn the light on.
6. Use the remote control to turn on/off the lights.
5. Light Switches

It is a safety hazard when there is no cover on a light switch. Placing a cover over the switch is an inexpensive fix. Depending on the type of switch installed, single, double or triple toggle switch covers are available. The size of the switch plate can vary as well. A standard size switch plate is used in this house, but if the switch outlet needs to cover a larger wall area, jumbo size switch plates are available.

*To install:*
1. To replace a light switch cover, you will need a flat head screwdriver.
2. Most switch covers come with the screws you will need.
3. Line up the switch plate with the holes in the wall.
4. Use the flat head screwdriver to fasten in each screw.

![Before](image1.jpg) ![After](image2.jpg)

6. Ceiling Fans

Proper lighting should be installed throughout the house. The picture below, on the left, has little or no lighting and is unsafe, with wires exposed. Checking the electrical wiring and replacing this fan with one that provides more light is recommended. The fan on the right has a large globe underneath providing adequate light. Many fans also come with dimmer switches to decrease or increase lighting. An electrician should install any ceiling fans for proper installation.

![Before](image3.jpg) ![After](image4.jpg)
7. **Cable Cord**

The cable cord in the middle of the room is a fall risk. There are two ways to fix this problem:
1. Purchasing a cable cover will secure the cable to the ground to prevent tripping over the cord.
2. Reroute the cable cord along the wall and over the door frame. (Preferred method)

*To secure the cord:*

1. Run the cord from the wall to the source.
2. The length of the cable cord will determine the number of cable clamps that are needed to secure the cable around the door and wall.
3. Individual clamps should be placed about a foot apart.
4. Start from the wall and apply the clamps over the cord by hammering the clamp into the wall.

Tools needed: Hammer and nail type cable clamps.

8. **Step Ladder with a Tray**

The wooden step ladder, in the left picture below, has a small standing platform and is unstable. The new, metal step ladder on the right is taller and includes a long handle bar to provide support when reaching for items up high. It also has a fold out tray and non-slip rubber steps to secure footing on the ladder.

*To use the step ladder correctly:*

1. Fully open ladder and place on a level surface.
2. Place items on the ladder tray before stepping on to it.
3. Hold the handle with both hands when stepping on or off the ladder.
4. When placing an item on or off a shelf, remember to always hold onto the handle with one hand.
9. Non-slip Steps

The poor lighting makes it difficult for an individual to notice where each stair ends, therefore causing a fall hazard. Using a non-slip tape to make a contrast line on the edge of each step will better define the staircase.

To apply the tape:
1. The tape used should be skid guard, safety tape about 2 inches thick.
2. Measure the length of one step and cut the tape to that length.
3. Before applying the tape, make sure the surface is completely clean and dry.
4. Lift one end of the strip and peel back the first 2 inches of the backing.
5. Press the tape firmly onto the step starting at one end.
6. Lift the strip from the other end and peel off the next few inches of the backing.
7. Press the tape down firmly until you have applied the entire strip to the stair.
8. Repeat for each step.

10. Contrast Floor

The basement floor color should be in contrast to the staircase (e.g. brown and blue). This allows a person to know that there are no more steps to be taken.

To Paint the Basement Floor:
1. Outline the area you are going to paint with tape.
2. With a paintbrush fill in the middle area of the tape with paint.
3. Let the paint completely dry before removing the surrounding tape.
11. Installing a Railing

Staircases should have a railing installed to provide support when ascending or descending the stairs.

To install hand railing:

1. Using a cordless drill, secure two support posts, 2in x 4in x 7ft, to the bottom step and the basement ceiling, if necessary.
2. Mark where each handrail bracket will be placed on the wall and on the support posts with a pencil, ruler and a level.
3. Screw in each bracket to the wall and support post.
4. Attach the 10 foot handrail to the brackets on the wall with a screwdriver.
5. Repeat steps 2-4 for the 44 inch handrail on the landing area.

Tools needed: Handrail, brackets, cordless drill, 6’ tape measure, ruler, screws, level.

12. Fixing a Railing

All homes should have a railing that is correctly positioned and securely fastened to the wall for support when ascending and descending any staircase.

To repair:

1. Remove current support brackets from the wall using a screwdriver.
2. Clean out all of the loose plaster.
3. Mix up repair plaster material in a mixing container.
4. Fill the hole with the repair mix using a putty knife to level with the wall.
5. When completely dry reinstalled bracket with new screws.

Tools and materials needed: Phillips screwdriver, brush, cordless drill, drill bits, screws, putty knife, mixing container and plaster repair material.
13. Grab Bars
Adding grab bars in different locations throughout the house provides support when needed. Securing two grab bars on both sides of the door in the picture below will provide stability for the individual when opening the door, and going up and down the stairs.

To install grab bars:
1. Locate where the grab bar will be placed on the wall with both ends of the bar over a wall stud. Using a pencil, mark on the wall the location of the screw holes in the ends of the grab bar.
2. Use a level to correctly place the grab bar.
3. Using a cordless screw driver, drill the screws that came with the grab bar through the holes in the grab bar and into the wall so that the heads of the screws are flush with the mounting plate on the grab bar.

Tools needed: Small level, cordless drill, drill bits and screw shields, if needed.

14. Loose Wires
The wires, in the picture on the left, should be mounted to the ceiling. To secure the cable/wires to the ceiling, a wire staple or clamps are used (Picture below).

To secure the wire,
1. Use a wire stapler, clamps or a wire tie to secure the cord to the ceiling.
2. Staples or clamps should be 12 inches apart.

Tools needed: Wire stapler or hammer and nail type cable clamps.
15. Basement Door

The old bi-fold door was not repairable. A new bi-fold door was installed.

To Install:
1. Remove door and all old hardware.
2. Install new hardware from door assembly as per instructions.
3. Place door in opening and make adjustments as needed.


Tools needed: Phillips screwdriver, cordless drill.

16. Clutter

The clutter in this room blocks walking paths and makes it a fall hazard. Eliminating clutter such as clothes, paper and baskets from the shelves and floor decreases the risk of falling.

Helpful tips:
1. Sort clothing into piles you would like to keep or toss out.
2. Place clothing into dresser and/or closet. Remove items from floor and place onto shelves.
3. Toss all unnecessary papers.
4. Place papers and small items into a filing cabinet and organizers.

Particular instruction may not be needed to remove clutter. The most difficult part is to keep the room clutter-free. A suggested way is to organize a room functionally and practically, e.g. using a filing cabinet. Make a habit of putting things away when you are finished using them. Habits are hard to change but are important for safety. For 25 steps on how to reduce clutter, visit http://www.casedesign.com/blog/home-remodeling/25-steps-on-how-to-remove-clutter