



Village of Huntley
Development Services
Department
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RESIDENTIAL BASEMENT REMODELING / FINISHING GUIDELINES

Is it time to finish or remodel your basement?

Obtaining a building permit is not scary.

Some may think that obtaining a permit is difficult, time consuming, costly and brings on unnecessary regulations. In fact, most residential permits take approximately 7 to 10 business days. If you have questions, our friendly staff will help guide you.

If you have a permit for a project, your project will be inspected. A building inspector can be a valuable helpmate for the homeowner and/or contractor. You can use the inspection time as an opportunity to learn about construction techniques and materials.

Not all projects require permits and inspections. Start by inquiring with the Development Services Department at Village Hall to discuss your project in detail.



When applying for a permit, please provide the following information:

- A completed Permit Application.
- A copy of the contractor's quote or proposal is required.
- The general contractor shall be registered with the Village. If the homeowner is the general contractor, the licensed electrician or licensed plumber will be considered the primary on the project and shall be registered with the Village.
- Electrical work may be done by the homeowner. Homeowners shall not be permitted to install electric services. (VOH NEC 110.1)
- Plumbing work may be done by the homeowner, only if the home is owner occupied. If not the homeowner, the work must be done by an Illinois licensed plumber. This is an Illinois State Law.
- A copy of the Electricians license and Plumbers license (055, 058, and letter of intent) will be required.
- The homeowner, designer or architect shall submit one electronic file of the required information for a basement remodel that is drawn to 1/4" = 1' scale, identified with the address of the property.
- Minimum of two floor plans are required; one of the existing basement and one of the proposed finished basement, drawn to scale, along with dimensions. (See attached drawing samples) It must show the layout of the entire basement/alteration with all rooms labeled with use. If drawing on paper, please use a ruler. Preferred scale 1/4" = 1'. (11x17 paper size is preferred)
- Extra floor plans may be submitted for clarity. (One for electric, one for hvac, one to show sizes of rooms, ect.)

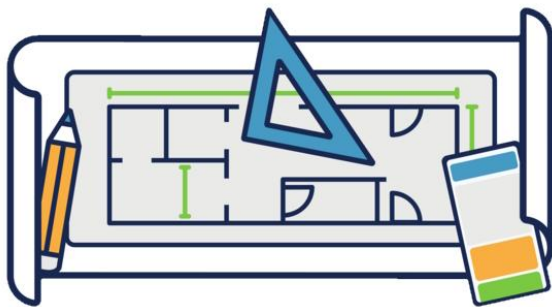


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- ❖ *Per Village of Huntley zoning ordinance, only one kitchen may be installed in a single-family dwelling.*
- ❖ **Indicate on the plans (to scale) all of the following (See attached drawings for guidelines)**
 - ✓ label each room
 - ✓ provide the clear dimensions of each room
 - ✓ Provide door sizes for each room
 - ✓ Window sizes and types (slider, block, egress)
 - ✓ Identify emergency escape window wells with ladder and clear dimensions of window well
 - ✓ Bars/counter tops require an elevation drawing showing the height of the counter top and appliance locations
 - ✓ Indicate height of ceiling and dropped ceiling areas
 - ✓ Identify modifications to the existing structure such as posts, beams and floor joists
- ❖ **On the plans, show the location of the following: (new and existing)**

✓ electrical panel ✓ electrical receptacles ✓ lighting (wall and ceiling) ✓ fans (exhaust fans, ceiling fans) ✓ smoke alarms ✓ carbon monoxide alarms ✓ plumbing fixtures (toilet, sink, shower)	✓ water heater ✓ sump/ejector pits ✓ furnace/heating appliances ✓ washer/dryer ✓ air ducts ✓ supply and return locations
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GENERAL CODE REQUIREMENTS

Room sizes: Habitable rooms shall have an area not less than 70 sq. ft. and shall not be less than seven feet in any horizontal dimension. (R304)

Ceiling heights: Habitable rooms, hallways, and corridors shall have a ceiling height of not less than 7 feet. Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches but not more than 50% of room area may be less than 7'0" high. Beams, girders, ducts and other obstructions shall not project to within 6 feet 4 inches of the finished floor. (R312)

Hallways: Hallways shall not be less than 36 inches in width, finished. (R318.6)

Emergency Escape and Rescue: Bedrooms are required to have direct access to the exterior by way of a properly sized window or door. Egress window to the exterior required in each bedroom: minimum 20" width, 24" height and 5.0 sq. ft. of opening area (5.7 sq. ft. above grade). Maximum 44" sill height from floor. (R319)

Egress window wells: Shall have a minimum clear dimension of 9 square feet with a minimum dimension of 36" measured from the exterior of the window directly out on a horizontal plane. Window wells with a vertical depth of more than 44" shall be equipped with an approved permanently affixed ladder or stair assembly. This assembly shall not encroach into the minimum 36" dimension more than 6". (R319.2)

Fire blocking: Vertical at the ceiling and floor levels, and horizontally at intervals not exceeding 10' along the length of the wall and at all interconnections of concealed vertical and horizontal spaces such as intersection of stud walls and soffits or dropped ceilings. (R302.11)

Gas fueled appliances: If walls are to be placed around the furnace and water heater areas, adequate combustion air must be maintained to the appliance for proper operation. Gas furnaces, clothes dryers, and water heaters cannot be located in or obtain combustion air from a bedroom, bathroom or closet. Clothes dryers must be in rooms provided with make-up air. The efficiency of the furnace must be

indicated. If the furnace, clothes dryer, and water heater are being enclosed, adequate combustion air must be provided for these appliances to operate properly (exception - direct vent appliances). For maintenance purposes, a minimum of 30 inches clear working space must be provided in front of furnaces and water heaters. Maintenance or removal of each appliance must be possible without removing the other or disturbing walls, piping, valves, ducts, vents, wiring or junction boxes. (M1503.6)

Clothes dryers: Must be vented to the exterior at least three feet from all operable windows and doors. When enclosing a laundry room, make-up air is required (minimum 100 square inches). (M1502)

Natural light and ventilation: 8% and 4% respectively of the square footage of the room area for habitable rooms. Alternatively, artificial lighting providing 6 foot-candles and mechanical ventilation of minimum 0.35 air changes per hour. (R325)

Bathroom exhaust fan: Minimum 50 CFM, ducted to exterior using rigid vent pipe. Must terminate minimum of 3' from any opening into the building. Bathroom showers: Shall be a minimum 30"x30" with watertight walls finished to a minimum 72" above the shower drain. (M1505.2)

Smoke Alarms: Are required in every bedroom, hallway adjacent to bedrooms, and every story in the house. Must be interconnected or listed wireless, hard-wired with battery backup. (R310)

Carbon Monoxide Alarms: In buildings with attached garages or fuel-fired appliances, CO alarms shall be installed outside each separate sleeping area within 15' of each bedroom. Must be interconnected or listed wireless, hard-wired with battery backup. (R311)

Insulation: Minimum R-19 required for wall insulation. (Ex. R-5 continuous with R-13 Batt) (IECC Table R402.1.3)

Stair Closets: Enclosed useable space under the stairs must be protected with minimum 1/2" gypsum wallboard. (R302.7)

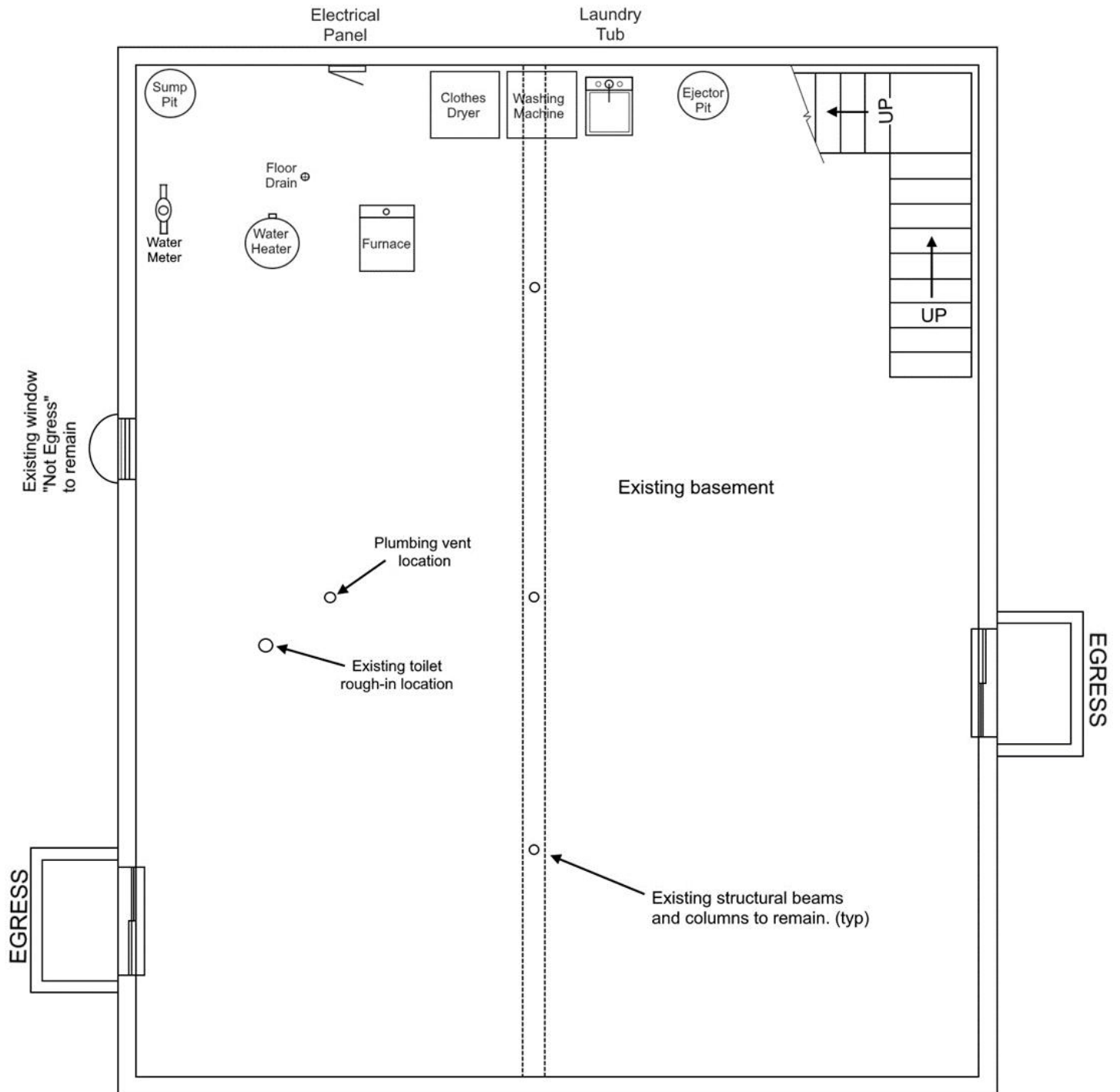
(The information provided should not be considered a complete list of code requirements.)



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Example floor plan of existing basement



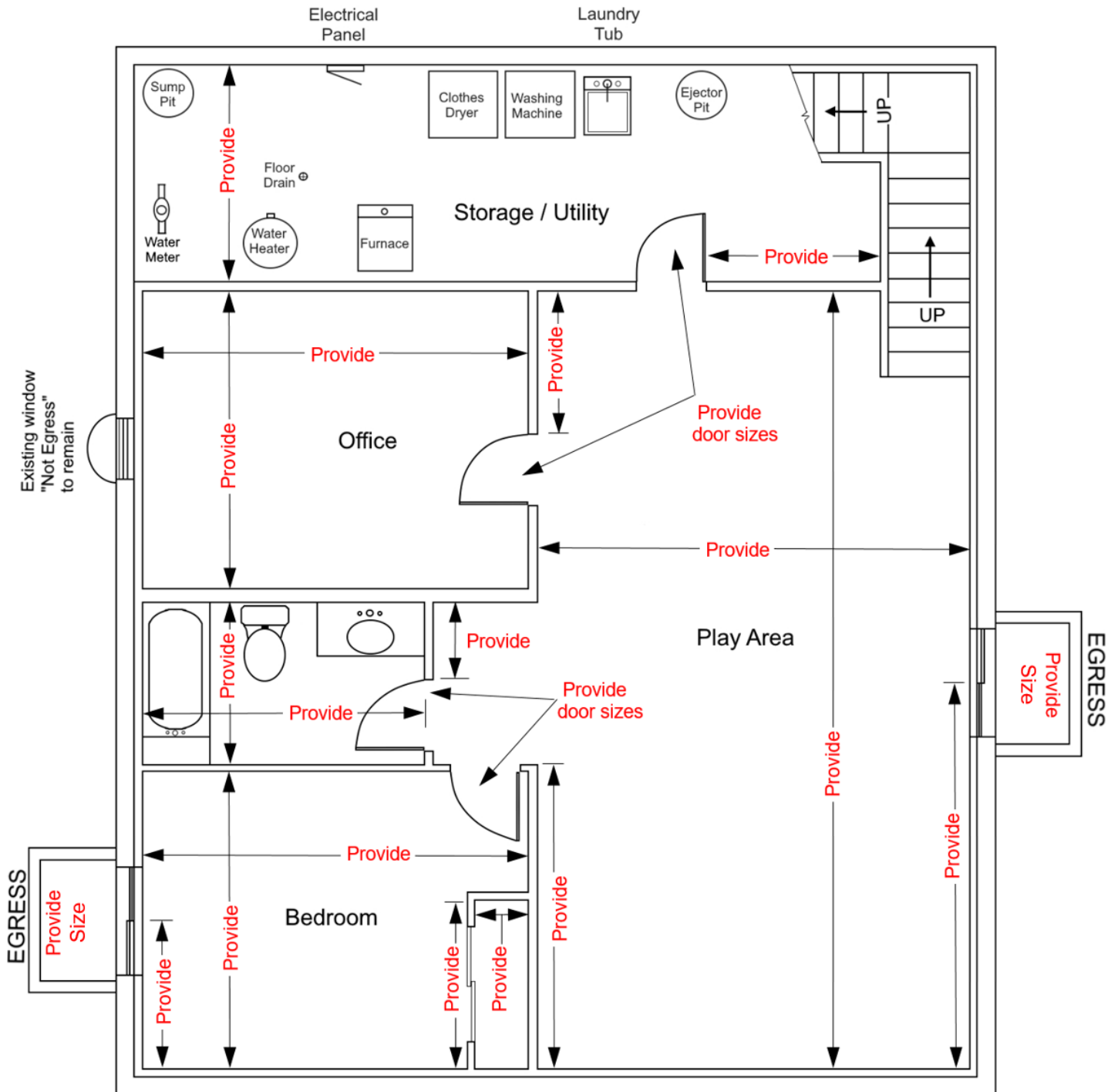


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Example floor plan of proposed basement (1)

Provide labels for all rooms, room sizes, closet sizes, window sizes and locations, door sizes and location.



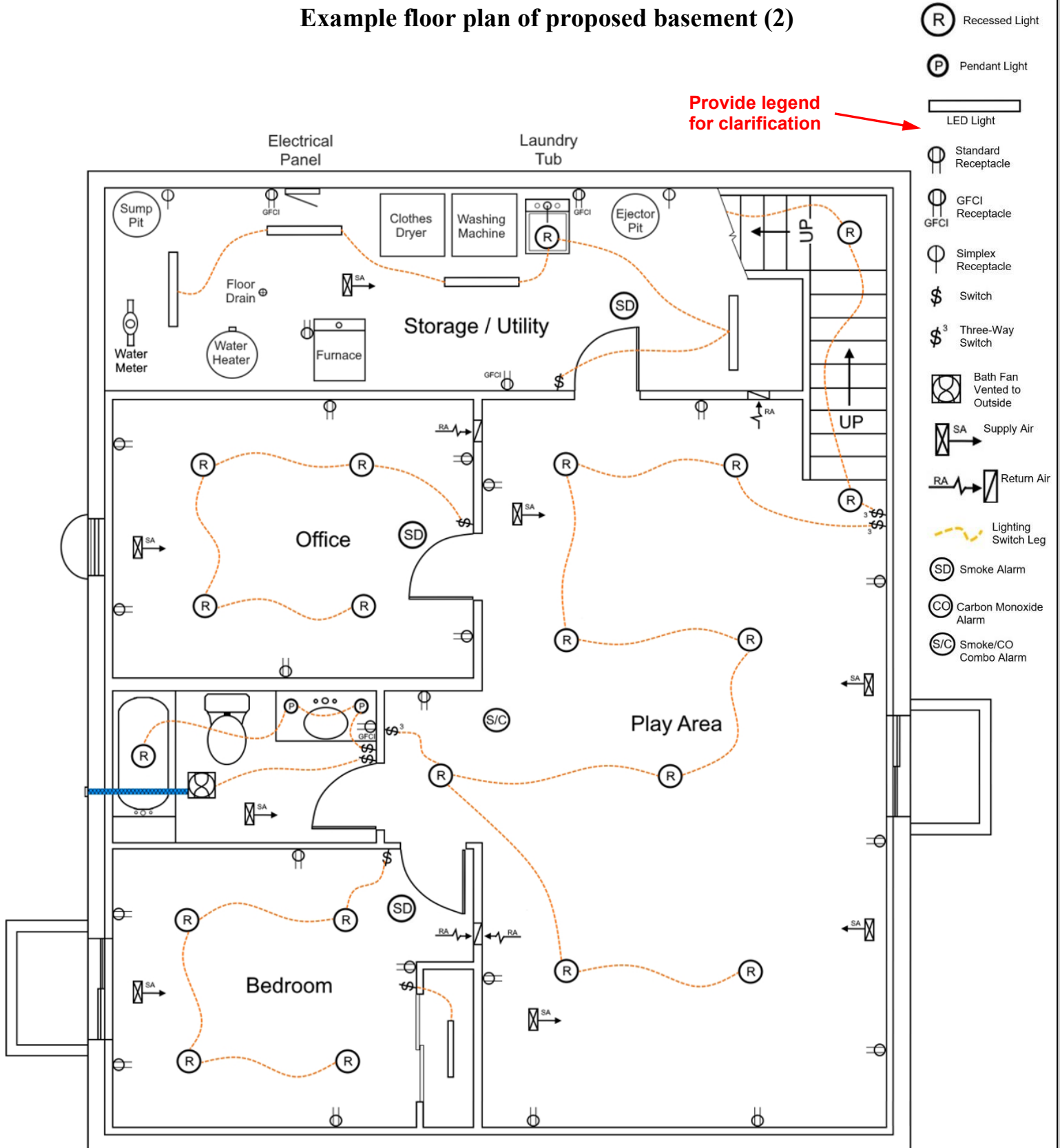
Please provide the required dimensions.
This will speed up the plan review process.



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Example floor plan of proposed basement (2)



Fill in the blanks wall detail

Top plate shall be attached to each existing joist above or install blocking between joist and attach top plate to blocking.

Provide attachment method (two 8d nails per joist or 3-inch framing screws)

Fire Blocking

2x

Top Plate

2x

Wall Studs

2x at 16" o.c.

Wall Cavity Insulation

R- batt.

Faced or Unfaced batt

batt.

Wall Covering

thick drywall
(ex. 1/2" or 5/8")

Treated base plate 2x

Attached to concrete floor with
(ex. Ram-set, or Tapcon's 16" o.c.)

Check A Box

Insulation Requirements

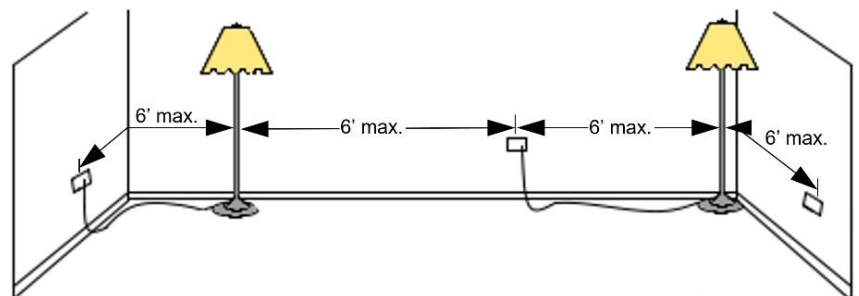
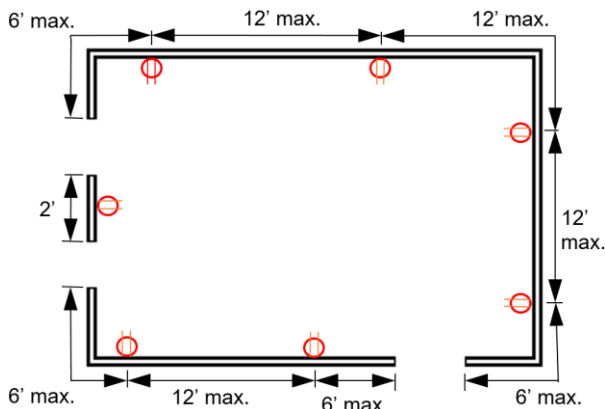
- ☐ Min. R-5 Continuous Rigid insulation with min. R-13 cavity (batt)
- ☐ Or existing R-11 Blanket insulation (sliced) With min. R-13 cavity (batt)
- ☐ Or R-19 cavity (batt) Insulation only (2x6 wall req'd for R-19)

Continuous Rigid Insulation

1" air gap

All receptacles shall be of the grounding type.

General use receptacles (bedrooms, family rooms, dens, sunrooms, recreation rooms and similar spaces) – Receptacles shall be placed on any wall that is at least two feet (2') in length, with spacing not to exceed six feet (6') from any opening or interruption in a wall, and is no more than twelve feet (12') from receptacle to receptacle. (NEC 210.52(A)(1))



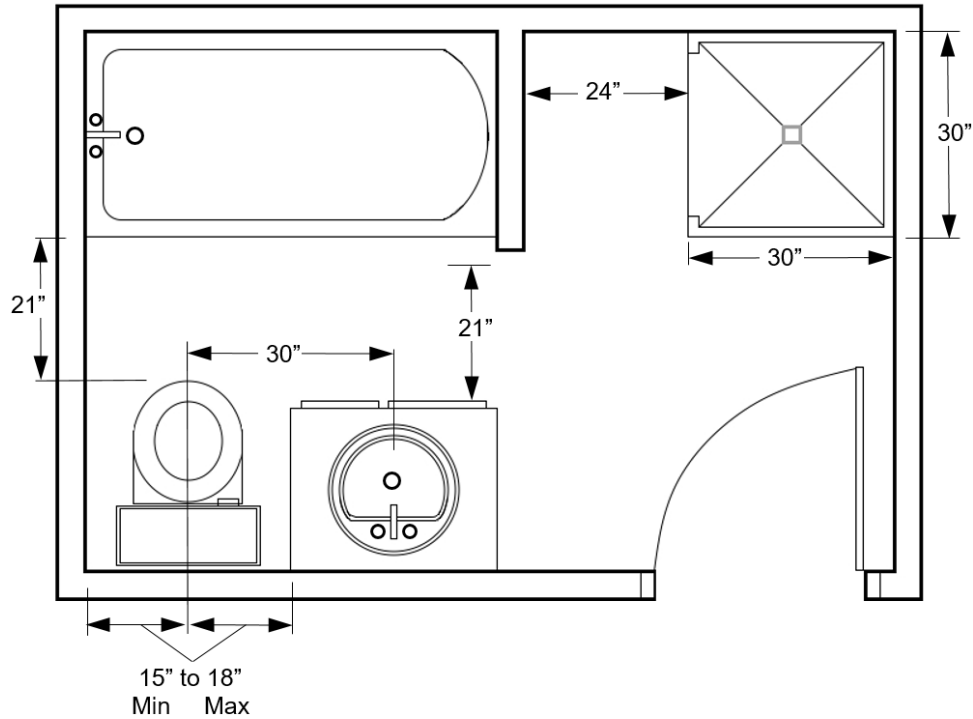


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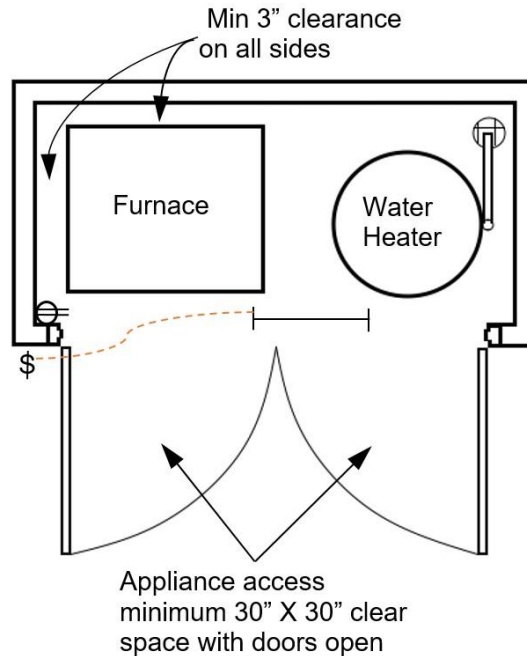
Clearances

Minimum Bathroom Fixture Clearances



Furnace and Water Heater Clearances

Outside air - the opening area depends on the method used. Contact the Village if you have specific questions regarding this method.



Inside air - inside air may also be provided from an adjoining room through openings located within 12 inches of the floor and ceiling. Each opening shall equal 1 square inch for each 1,000 BTU/hr of total input rating of all appliances and a total minimum of 100 square inches. The adjoining room must have a volume equal to at least 50 cubic feet for each 1,000 BTU/hr of aggregate input rating of the appliances.



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Inspections are needed throughout the project

Once your permit is issued and you have started work, you will need periodic inspections to ensure that it complies with the approved permit plans and all code regulations.

The general contractor or homeowner shall field verify all work is code compliant prior to scheduling inspections. If it is not ready when the inspector arrives, you may be charged reinspection fees.

To request an inspection, please call our office at **847-515-5252**. When you call, you will be asked for the permit number, property owner's name, project address, type of inspection needed, and date on which inspection is desired. Unless all of the work is outside and accessible, an adult needs to be at the site to provide access for the inspector. A set of approved plans and all plan review notes **MUST** be on site. Please call before 2:00pm for next day inspections.

Do not assume the project is complete when the construction work is finished.

The property owner is ultimately responsible for making sure the project is completed, and has passed all of the final inspections. For your own protection, you may wish to have all of the final inspections completed and approved prior to making the final payment to your contractors. Refundable bonds will not be returned until all final inspections have been approved. If the work is being done by contractors, make sure they are scheduling inspections as needed, including all of the final inspections.



Required Inspections - The list below is intended to cover the required inspections for the majority of basement remodeling / finish projects and may not include all inspections necessary for every situation. Please contact the Village with any questions regarding special conditions.

Underground Plumbing – This inspection is only required if the piping coming out of the concrete slab needs to be relocated, or new underground plumbing has been installed. Call for this inspection prior to covering the newly placed pipes.

Rough Inspections - All rough inspections shall be scheduled for the same day.

Rough Electric – Call for inspection when wires have been pulled and terminated to locations at outlets and fixtures, prior to insulation or drywall. Do not install fixtures.

Rough Mechanical – Call for inspection when any ducting has been installed, before it is covered with drywall.

Rough Plumbing – Call for this inspection before you set any of the plumbing fixtures, except the tub or shower base. This should be installed for the rough inspection.

Rough Frame – Call for this inspection, prior to insulation or drywall.

Insulation inspection – Call for inspection when ready, prior to concealment.

Final Inspections - All final inspections shall be scheduled for the same day.

Final Electric – Ready for inspection when all fixtures and receptacles have been installed and functioning. All electrical work in this scope has been completed.

Final Mechanical – Ready when all items noted by plan reviewer are in place.

Final Plumbing – This inspection should be called in when all plumbing work is complete.

Final Building – Everything shall be done, complete, finished, and the space ready to enjoy!

Here are a few Common Code Violations

Adding a Basement Bedroom without an Egress Window. Seems like a no-brainer: Junior needs his own bedroom, and you've got all this space in your basement. A few walls and carpet and voila! -- an extra bedroom. However, it is not that simple. Codes say that any "sleeping room" must include an egress window that's at least 20 inches wide and 24 inches high, with a minimum opening of 5.7 square feet, enough for an adult to crawl through.



Venting a Bath Fan into an Attic

You've spiffed up the guest bathroom and even added a new bathroom vent fan; nice going. However, you are not finished unless you vent that fan all the way to the outside of your house.

Venting directly into an attic space might be easy, but your fan is going to deliver plenty of humid air into your attic where it can cause mold and rot. Building codes say you have to vent the air from the fan to the outside.

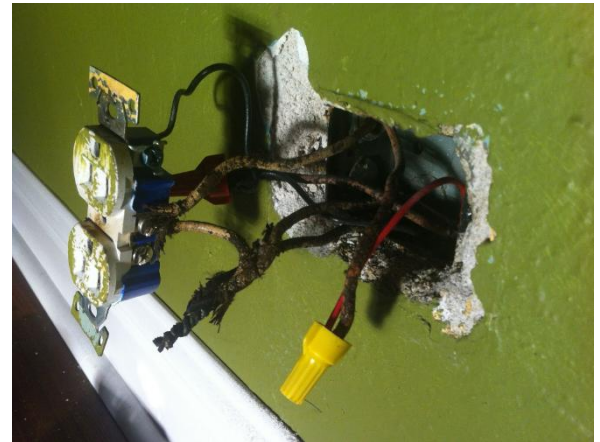
Botched Electrical Work

Few examples of home improvement and repair are life threatening, but electrical work definitely can be. That is why utmost caution is needed when you do your own wiring. Here are a few common wiring mistakes:

Wrong size circuit. 15-amp circuits are for lighting fixtures and 20-amp circuits are for receptacles. If you are renovating and want to add a receptacle, do not splice into a lighting circuit to do it, extend it from an existing 20-amp circuit.

Splicing wires without a junction box. Do not splice wires together with a couple of wire nuts and some electrical tape and call it a day. All wire connections must be inside an approved junction box.

While you are at it, you cannot hide a junction box inside a wall; it must be visible and accessible.



Handrails without Returns

Codes require handrails to have "returns," meaning they need to turn and end at the wall (photo "Solution" below). Returns keep items such as sleeves and purse straps from getting caught on the end of the rails and causing a fall. Handrails need to be placed 34 to 38 in. above the nose of the stair treads and must be 1-1/4 to 2-5/8 in. thick.