



Doylestown Township
Code Enforcement Department

BASEMENT FINISHING

Requirements for Plan Review/Approval

Any complete or partial finishing of a basement requires the following permits.

- Building Permit
- Electrical Permit
- Mechanical Permit (Exhaust fans, HVAC Work, etc.)
- Plumbing Permit (if applicable)

Construction must comply with the ICC 2015 Codes and Electrical work with the NEC 2014

Permit application forms are available at the Township or from the Township website, doylestownpa.org.

Each application requires two (2) sets of architectural plans and specifications drawn to scale, fully dimensional, showing the entire basement area (finished and unfinished). All rooms, spaces and partitions must be included and their uses labeled. (Show a cross-section through the wall).

Architect designed drawings are not required for non-structural work, however, the homeowner should sign and date each page of submitted drawings.

Contractors and homeowners are required to coordinate with subcontractors to submit all permit applications and accompanying drawings at one time. **PARTIAL APPLICATIONS WILL NOT BE ACCEPTED.**

PERMIT REVIEW will be completed within fifteen (15) days upon receipt of a complete application. Upon permit approval, you will be given a call when the permit is ready for pickup, and you may start construction as soon as permit fees are paid in full.

THE FOLLOWING INFORMATION IS TO BE SHOWN ON THE PLAN OR PROVIDED WITH THE APPLICATION. FAILURE TO DO SO WILL RESULT IN REJECTION OF THE APPLICATION AND DELAY IN PERMIT APPROVAL.

EGRESS:

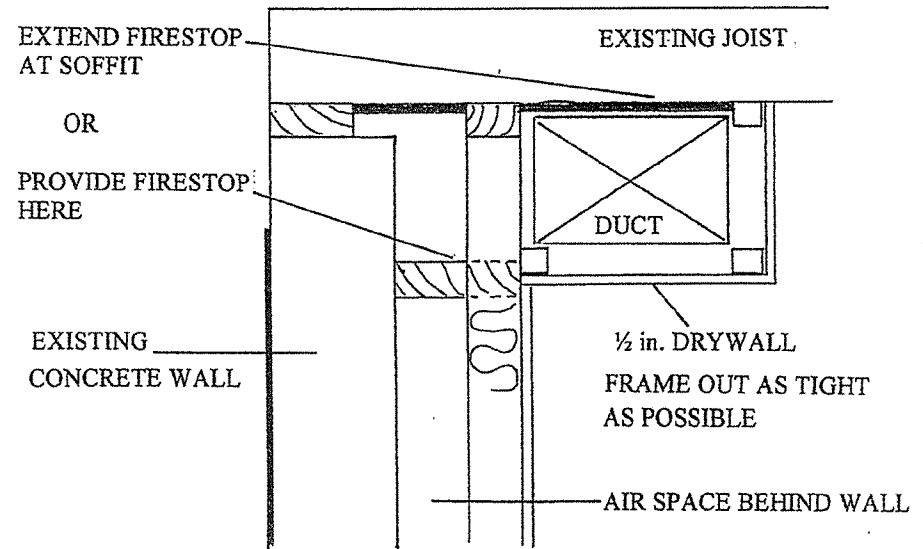
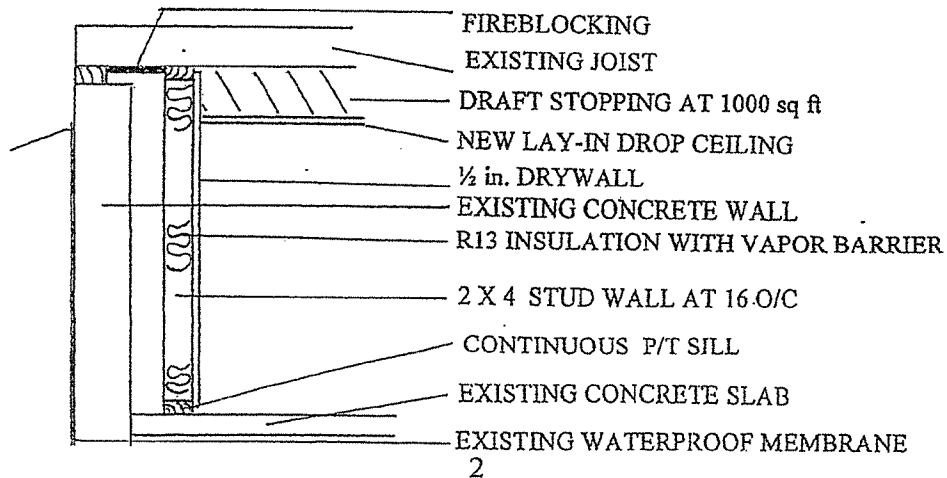
All basements that are to be finished in whole or part and every sleeping room requires at least one (1) openable emergency escape and rescue window or exterior door opening for emergency escape and rescue. Windows need a clear opening of 5.7 sq. ft. if below grade and 5.0 sq. ft. at grade, and a sill height of 44 inches. Home improvement stores carry windows, window wells and bulkhead steps/doors that will meet the code. Show the second means of egress with dimensions on your plan.

DAMP-PROOFING:

Indicate if the exterior of the basement wall was damp-proofed at the time of construction. If not, the interior wall will have to be coated with a damp-proofing agent. Specify type and means of damp-proofing in your application.

WALL CONSTRUCTION:

Provide a drawing of a wall section showing method of construction and materials used, e.g., metal studs, 2 x 3 or 4 studs and their spacing, pressure treated plates and their method of attaching to floor. Top/bottom plates, sheetrock to top plate, insulation, interior wall finish, fireblocking, etc.



FIREBLOCKING AT SOFFIT

FIREBLOCKING/DRAFT STOPPING

Using 3/4" plywood or 1/2" sheetrock, show fire stopping between top of stud wall and foundation wall around all soffits, concealed spaces, pipes, ducts and vertically at the end of walls. Use MINERAL WOOL and ASTM E84 FIRECAULK or FOAM where needed to make an airtight seal. The intention is to make the space behind a wall airtight to slow the spread of fire.

Show the approximate location of fire draft stopping (heavy lines on the plan) required at 1000 sq. ft., and running parallel with the joists. Draft stopping is required when suspended ceilings are installed, and/or open web trusses are encountered, and should consist of a 1/2" drywall curtain suspended from the floor joists to touch the drop ceiling. On floor plan indicate direction of joists in all rooms.

STAIRWAYS:

Stairway(s) with 36" high handrail with full height walls on both sides, or 36" high handrail/guard with balusters 4" max. spacing on both sides. Handrails must comply with the graspability requirements of 2-1/4" cross section max. grip size, and 6-1/4" max. perimeter, and 4" min. perimeter, and be continuous all the way up and be returned to the wall.

Show on plans. The headroom must be verified by the contractor that 6'8" from a point connecting all noses vertically upward is provided. The underside of stairs needs to be protected with a minimum of 1/2" sheetrock.

DOORS:

All doors to rooms and spaces require 2'8" doors, min., double doors require at least 1 leaf to be 2'8". Closets 10 sq. ft. or less may have any size door. Show all doors or windows to the outside and their dimensions. Exterior egress doors to be 36".

MECHANICAL:**MECHANICAL ROOMS:**

Mechanical/heater rooms require a minimum room size of about 100 sq. ft. for 2 furnaces and 1 water heater; and about 80 sq. ft. room size for 1 furnace and 1 water heater. Include/show access dimensions in front of the units, (30"), side/rear clearances and a light/switch. All clearances to combustibles, flues, chimneys and heaters must be maintained.

COMBUSTION AIR:

Air for combustion for fossil fueled appliances must be provided to the mechanical room from the entire finished basement area. For 2 furnaces/1 water heater show 2 - 18" x 30" grills high-low on wall(s). For 1 furnace/1 water heater show 2 - 12" x 30" grills 1 high/1 low in wall(s). If these grills only adjoin a small room, additional grills of the same size must be added to the larger rooms.

HVAC REQUIREMENTS:

Turning an unfinished basement into habitable space requires a method of heating. If the existing HVAC system is being used to provide heat to the finished areas also, provide a statement signed by an HVAC contractor on the company letterhead stating; "the existing HVAC system is adequate to maintain 68°F 3' above floor throughout the existing house and finished basement." The HVAC contractor is to provide a supply/return layout for each finished room with duct sizes. Show all supply registers/return grills in walls/ceiling, in all finished rooms. Use HVAC symbols. Supply/returns should be opposite each other (supply low/return high).

If the system is unable to support the extra load of a finished basement, an alternative method of heating such as baseboard, electric convection heat or gas fireplace will be required, with full details on your permit applications. Carbon monoxide detectors are required with gas fireplaces.

PLUMBING:

Bathrooms (if providing) shall show all fixtures/clearances to them. Provide cut sheets on pump specifications and tank specifications. A ducted fan (50 c.f.m.) to the outside, tempered glass on shower/tub enclosure door and tile behind tub/shower 6' high are to be shown. Show location of and give specifications of any ejector pumps, pits and method of venting. Installations to comply with Bucks County Water & Sewer Authority specifications.

Any valves (plumbing, gas) cleanouts, etc., must be provided with an access panel in the wall or ceiling.

Every finished basement requires a sump pit.

ELECTRICAL:

Include an electrical plan showing the circuits, and the number of lights, switches, receptacles and GFCI receptacles on each circuit. Use electrical symbols. A switch at the top and bottom of the stairs is required for the stairway light at the top of the stairs, and/or the turned landing. In addition, walkout basements require switches at the bottom of the stairs and the exterior door to control the lights in between. A light is required above exterior steps. This electrical plan does not waive the contractor from complying with the 2008 N.E.C. and obtaining the electrical inspections by electrical underwriters. Show smoke detectors: 1 is required in the basement. If the basement contains sleeping rooms, one is required in each sleeping room and the immediate area outside the sleeping room. The detectors are to be interconnected, 120v with battery back-up. The existing house is to have 1 smoke detector in each sleeping room, the area outside sleeping rooms, and 1 on each other floor minimum.

CARBON MONOXIDE ALARMS:

An approved carbon monoxide alarm, complying with UL 2034, shall be installed outside of each sleeping area in the

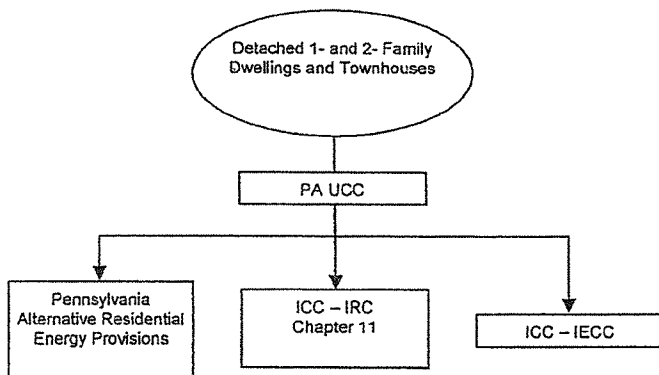
immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages. Installing CO detectors at this time is required in existing floors of the house as well as the basement.

If there is an alarm system in the house or basement, it needs to be registered with the Doylestown Township Police Department.

INSULATION:

Show insulation and its R value. No paper backing is to be left exposed as it is combustible.

THERE ARE THREE WAYS TO INSULATE A BASEMENT:



Flowchart Showing the Regulatory Paths for Space Conditioning Energy Compliance

State on the plan which one of the three paths you are going to follow.

However, the easiest may be the PA Alternative Residential Provisions found at the PHRC website (Pennsylvania Housing Research/Resource Center.)

Briefly, if following the PA Alternative you can insulate all the basement exterior walls to a minimum of R13.

OR

insulate all the basement walls enclosing conditioned spaces to the above values, and the ceilings in unfinished areas with R19 insulation. Within these unfinished areas HVAC ducts are to be insulated to R6, and any piping carrying fluids above 105 F or below 55 F shall be insulated to R2.

ZONING APPROVAL

No basement is to be used as a rental apartment or in-law suite without first securing Zoning Approval from the Doylestown Township Zoning Hearing Board.