



TOWNSHIP OF NORTHAMPTON

55 Township Road

Richboro, PA 18954

Building - Code Enforcement Department

Phone: 215-355-3883

Fax: 215-357-3650

**FINISHED BASEMENT REQUIREMENTS
IN EXISTING BASEMENTS
FOR PLAN REVIEW AND APPROVAL**

(Revised: 4-26-2022)

Construction to Comply with International Residential Code 2018

Provide three (3) sets of construction documents along with plans and specifications, drawn to scale (1/4"), fully dimensioned, showing the entire basement area (finished and unfinished areas).

Show the use of all rooms and spaces, location of all doors/sizes, plumbing fixtures, lights/switches, mechanical ducts/sizes, stairs and handrails, windows, lally columns, and accessories, etc.

General Requirements to Aid in Plan Submittal:

All bedrooms in finished basements shall have an Emergency Escape and Rescue Opening in accordance with the minimum clear opening dimensions, location, height, exiting, etc., of the IRC, Section 310. An additional Emergency Escape and Rescue Opening is not required in any other rooms, spaces, or areas. "Bilco" style doors are acceptable for meeting this requirement. An insulated type of door is required at the opening through the foundation wall at all "bilco" style doors.

Signed and sealed structural details are required for openings through foundation walls and must show in detail how the existing structure is supported along with the wall or bulkhead construction, ladder or steps, drainage, and waterproofing.

Ventilation air is to be provided in each habitable room.

If operable window(s) are provided in any room, it must have a clear opening size of 4% of the floor area of that room. Otherwise, a mechanical ventilation system must be provided. This can be done by installing a 6" diameter duct from the outside to the room(s) with a barometric damper, bird screen, and rain hood. This should be extended into the room as far as possible to temper the air. In addition, install a fan(s) in each room ducted also to the exterior and wired to the room lighting. Locate the fan opposite of the intake air grill within the room. An alternative would be to install a whole house ventilation system.

Combustion air is to be provided for all liquid or gas-fueled appliances located in the basement area, usually in a separate mechanical/heater room. In newer houses, (mid-1998 and later), this was done by the builder. Just show the heater(s) and water heater, and the 1 or 2 combustion air ducts running from the outside to the top of the equipment. Depending on interior wall locations, these ducts may have to be extended into the mechanical/heater room. Houses built prior to mid-1998, a few items must be shown:

1. BTU input of the heater(s) and water heater;
2. Type of heater and water heater (oil or gas); and
3. Size of the mechanical/heater room and room adjoining this room, with this information, along with your basement plans. The department will inform you in determining the combustion air size and method of obtaining it.

The Plans Must Also Include the Following HVAC Information:

1. Heater and water heater location, with at least 30" in front for Servicing.
2. A door wide enough to allow the equipment to be replaced.
3. All heating or a/c supply and returns in ceilings or walls.
4. Bathrooms are to have their exhaust fan ducted to the exterior unless there is an operable window of 1.5 square feet.
5. Heat loss calculations for heating and cooling that indicates the existing system is adequate for the finished basement and existing house, **to be prepared by an HVAC contractor and in accordance with ACCA Manual J or other approved method (IRC M1401.3).**

Provide a Section Detail of the Basement at the Existing Foundation Wall, Showing the Following:

Refer to drawing.

1. Waterproofing type/manufacturer/specs. If house was built after mid-1998, this was already done by the builder.
2. New finished wall construction: metal studs/2X studs with p.t. plates and spacing (interior also).
3. Basement wall insulation: R-13 min. (PHRC Alternative Table 301 or IRC Table N1102.1) with vapor barrier. Wood-framed exterior walls such as walk-out basements are to be insulated to R-13 with vapor barrier.
4. Fire blocking at the top plate to the existing foundation wall usually done with $\frac{3}{4}$ " plywood, 2X lumber, $\frac{1}{2}$ " drywall, mineral wool, or fiberglass insulation (must be tight-fitting and secured in place), or non-combustible caulk.
5. Install fire blocking in walls vertically every 10' with $\frac{1}{2}$ " drywall. Close off ends of all walls. Show locations on the plans.
6. All soffits, dropped ceilings, concealed spaces, pipes, and ducts are to be fire blocked.
7. Ceiling height (7' min.) and its location (dropped/suspended or attached to joist above).
8. If the ceiling is suspended or hung below open web trusses, draft-stopping is required at 1,000 square feet areas. This is installed as a curtain hung down from the floor joists above to the top of the suspended ceiling. This can be done with $\frac{1}{2}$ " drywall. Seal around all ducts, pipes, beams, and wires.

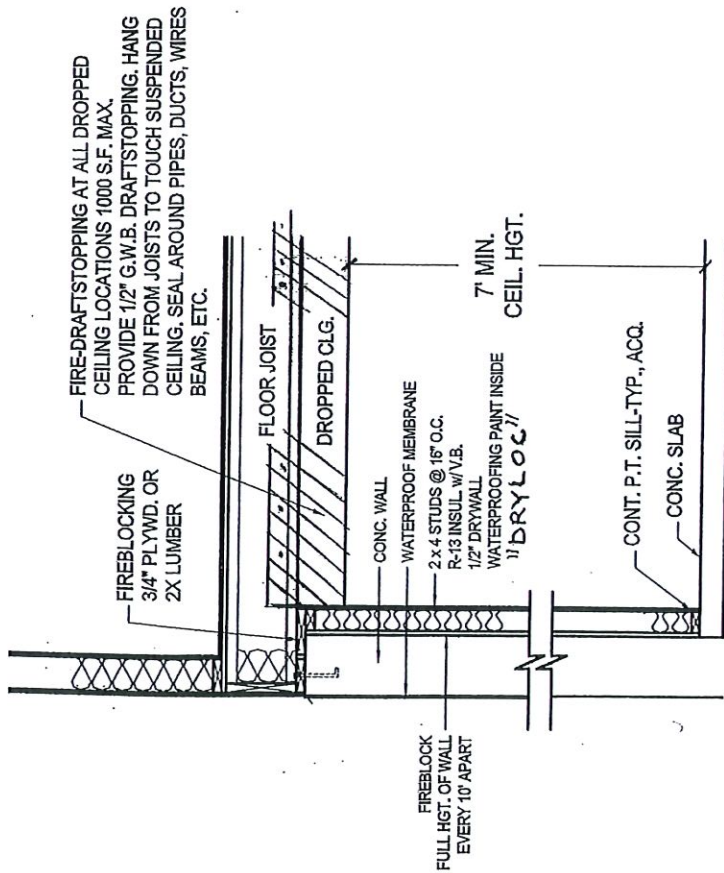
Show the approximate location of draft stops on floor plan.

Provide an Electrical Plan Showing All Lights, Switches, and Receptacles:

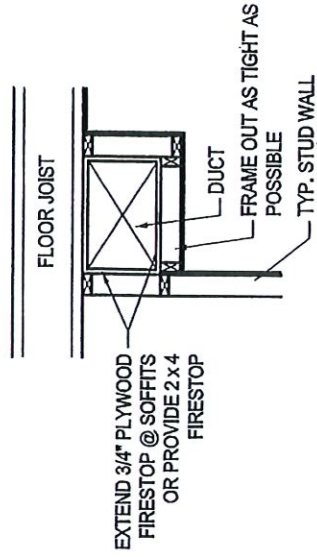
Switches are required at the top and bottom of the stairs, along with a light at the top of the stairway or at the landing. This is not a review for electrical code compliance. The electrical contractor is required to obtain the required electrical inspections by an approved inspection underwriter.

Miscellaneous Items to be Shown or Specified:

1. Smoke detector in the basement area.
2. Smoke detectors at each floor level in the existing house, in each bedroom, and immediately outside the bedroom area. These smoke detectors may be battery type.
3. Handrail 34" high up to first floor. If installing new rails, they must be continuous, except at landing turns (not winder treads) and be returned to the wall or post at the top and bottom.
4. Open sides of stairs are to be provided with 34" high guardrails with balusters less than 4" spacing.
5. Carbon monoxide detector(s) outside all existing bedroom areas.



TYPICAL SECTION
SCALE: 3/8"=1'-0"



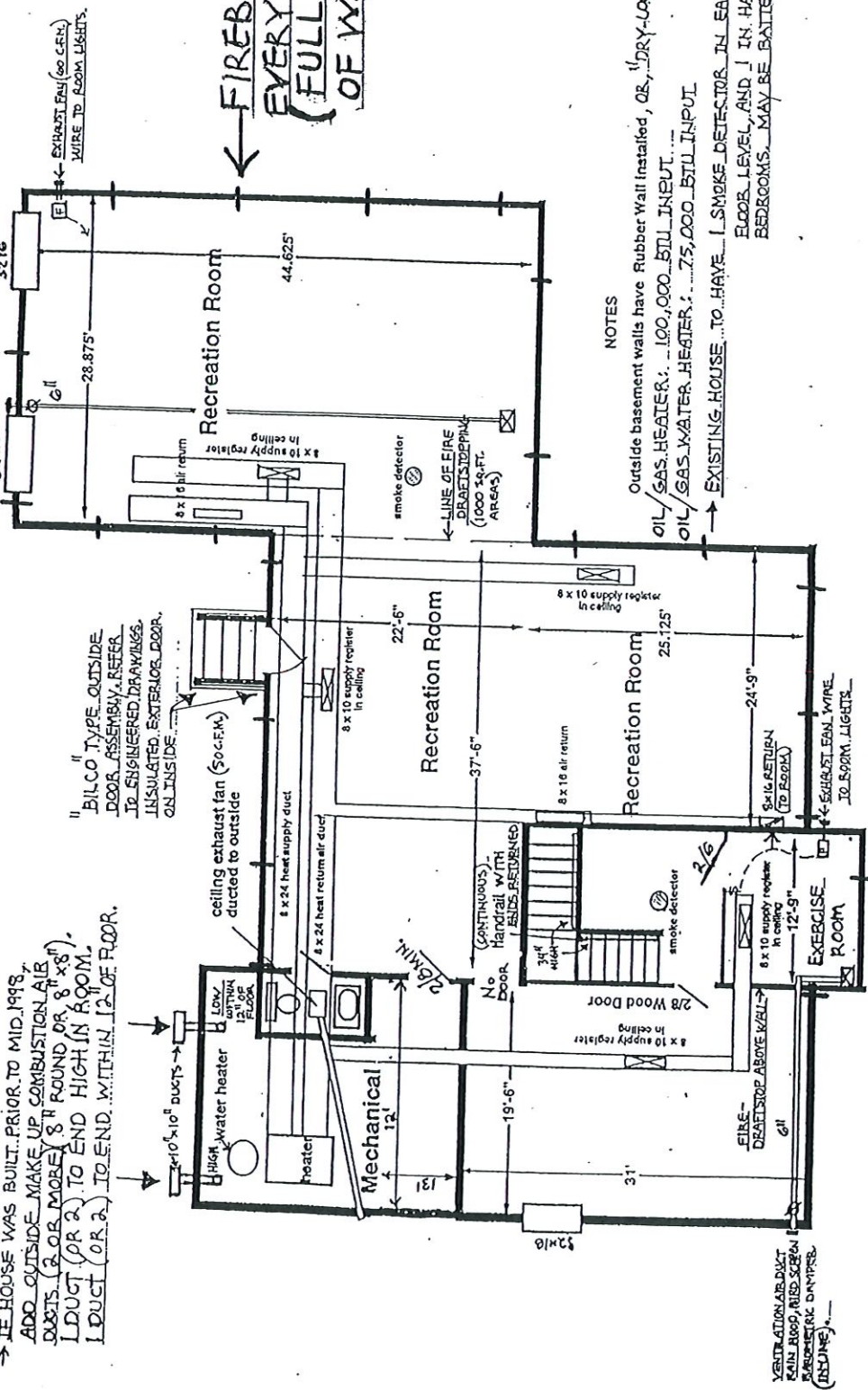
SECTION @ SOFFIT
SCALE: 3/8"=1'-0"

→ IF HOUSE WAS BUILT AFTER MID 1988 AND ALREADY HAS OUTSIDE AIR DUCTS = LEAVE

→ IF HOUSE WAS BUILT PRIOR TO MID 1988, ADD OUTSIDE MAKE UP COMBUSTION AIR DUCTS (2 OR MORE) 8" ROUND OR 8" x 8" DUCT (OR 2) TO END HIGH IN ROOM, 1 DUCT (OR 2) TO END WITHIN 12" OF FLOOR.

"BILCO" TYPE OUTSIDE DOOR ASSEMBLY REFER TO ENGINEERED DRAWINGS, INSULATED EXTERIOR DOOR ON INSIDE

← FIREBLOCKING EVERY 10' (FULL HEIGHT OF WALL)



NOTES

Outside basement walls have Rubber Wall installed, OR, "DRY-LOC" THOROSEAL WATER-PROOF OIL/GAS HEATER. 100,000 BTU INPUT

OIL/GAS WATER HEATER: 75,000 BTU INPUT

→ EXISTING HOUSE TO HAVE 1 SMOKE DETECTOR IN EACH BEDROOM, ON EACH FLOOR LEVEL, AND 1 IN HALLWAY OUTSIDE BEDROOMS. MAY BE BATTERY TYPE.

FINISH BASEMENT EXAMPLE (ELECTRICAL NOT SHOWN)

VENTILATION AIR DUCT RAIN RISK, RISK SCREEN & MAGNETIC DAMPER (ASSUME)