

TOWN OF BOW, NEW HAMPSHIRE RESIDENTIAL BUILDING/OUTDOOR STRUCTURE/POOL PERMIT AND PLAN SUBMITTAL REQUIREMENTS

RESIDENTIAL ONE AND TWO FAMILY STRUCTURES AND TOWNHOUSES

STRUCTURES COVERED UNDER THE 2009 INTERNATIONAL RESIDENTIAL BUILDING CODE

PLAN SUBMITTAL REQUIREMENTS:

The Bow Building Department, at its discretion, reserves the right to require any project submittal, due to square footage, complexity or time constraints, be accompanied by a plan review conducted by a licensed New Hampshire structural engineer or an approved third party agency. Omission of any required information may cause delays with permit issuance. The code official may, waive specific requirements on a case by case basis.

NEW BUILDINGS AND ADDITIONS

Completed Building Permit application must accompany all plan submittals. Allow a **minimum of seven (7) business days for initial review of completed plan packets.**

PLAN PACKETS MUST INCLUDE THE FOLLOWING INFORMATION:

Two (2) sets of building plans, *bound or stapled*, (Minimum size 11" x 17". Maximum size 30" x 42") The plans shall be in compliance with the New Hampshire State Building Code and reflect any Planning Board and/or Zoning Board approvals and stipulations. Each plan set shall include the following *when applicable*:

- Architectural – Floor plans, exterior elevations
- Structural – Framing of floors, walls, roof, deck etc.
- Plumbing – Location of plumbing fixtures and appliances o Foundation – Location of footings, size, depth, etc.
- Mechanical/HVAC – Location of furnace, hot water tank, A/C compressor etc. o Gas piping – Location of tanks, gas fueled appliances
- Smoke/Carbon Monoxide – Location of smoke and carbon monoxide detectors o Fire suppression – Location of sprinkler heads, tanks
- Plot – Plot plan showing structure, utilities, septic, etc.
- Completed EC-1 form.

Projects utilizing engineered structural products (beam, truss, LVL, etc.) shall submit the following:

- Manufacturer product and installation specifications for engineered beams (LVL, micro-lam, etc.)
- If the structure is to be built using an engineered system (engineered beams and/or joists) the drawings will require review by a licensed New Hampshire structural engineer.
- For one and two family structures, prior to Certificate of Occupancy, one set of "As-built" plans, *bound or stapled* (Minimum size 11" x 17". Maximum size 30" x 42") **or** one compact disc in .pdf format shall be submitted to the Building Department.

REMODELING AND RENOVATIONS

Completed Building Permit application must accompany all plan submittals. Allow a **minimum of seven (7) business days for initial review of completed plan packets**.

PLAN PACKETS MUST INCLUDE THE FOLLOWING INFORMATION:

Two (2) sets of building plans, *bound or stapled*, (Minimum size 11" x 17". Maximum size 30" x 42") The plans shall be in compliance with the New Hampshire State Building Code and reflect any Planning Board and/or Zoning Board approvals and stipulations. Each plan set shall include the following *when applicable*:

- Architectural – Floor plans (existing & proposed layout) and elevations
- Structural – Framing of floors, walls, roof, deck etc.
- Plumbing – Location of plumbing fixtures and appliances
- Mechanical/HVAC – Location of furnace, hot water tank, A/C compressor etc.
- Gas piping – Location of tanks, gas fueled appliances, piping material and sizes
- Smoke/Carbon Monoxide – Location of smoke and carbon monoxide detectors
- Fire suppression – Location of sprinkler heads, tanks

PROJECTS UTILIZING ENGINEERED STRUCTURAL PRODUCTS (BEAM, TRUSS, LVL, ETC.) SHALL SUBMIT THE FOLLOWING:

- Manufacturer product and installation specifications for engineered beams (LVL, micro-lam, etc.)
- If the structure is to be built using an engineered system (engineered beams and joists) the drawings will require review by a licensed New Hampshire structural engineer.

SHEDS, BARNs, GARAGES AND OUTBUILDINGS

To be considered a “**shed**”, the structure must be used as tool, storage, playhouses and similar uses. If the shed is less than 200 square feet, the permit is not required, provided compliance with the zoning regulations for setbacks, wetlands/buffers, etc. If the shed is over 200 square feet in area, foundation requirements and all other code provisions shall apply in addition to zoning setback regulations.

To be considered a “**barn**”, the primary use is for livestock and animals.

Garages are for parking and storage of motor vehicles.

Detached structures (cabanas, pavilions etc.) used for recreation, habitation, etc. shall be considered “**outbuildings**” and will require the same documentation as new construction.

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Two (2) sets of building plans, *bound or stapled*, (Minimum size 11" x 17". Maximum size 30" x 42") The plans shall be in compliance with the New Hampshire State Building Code and reflect any Planning Board and/or Zoning Board approvals and stipulations. Each plan set shall include the following *when applicable*:

- Architectural – Floor plans, exterior elevations
- Structural – Framing of floors, walls, roof, deck etc. o Foundation – Location of footings, size, depth, etc.
- Plot – Plot plan showing structure, utilities, septic, etc.

DECKS

Completed Building Permit application must accompany all plan submittals. Allow a **minimum of seven (7) business days for initial review of completed plan packets**. Plan packets must include the following information:

Two (2) sets of building plans, *bound or stapled*, (Minimum size 11" x 17". Maximum size 30" x 42") The plans shall be in compliance with the New Hampshire State Building Code and reflect any Planning Board and/or Zoning Board approvals and stipulations. Each plan set shall include the following *when applicable*:

- Architectural – Floor plans, exterior elevations
- Structural – Framing of beams, deck etc.
- Foundation – Location of footings, size, depth, etc.
- Gas piping – Location of permanently installed grill, if applicable.
- Plot – Plot plan showing structure, utilities, septic, etc.

IN AND ABOVE GROUND POOLS

Completed Building Permit application must accompany all plan submittals. Allow a **minimum of seven (7) business days for initial review of completed plan packets**. Plan packets must include the following information:

Two (2) sets of building plans, *bound or stapled*, (Minimum size 11" x 17". Maximum size 30" x 42") The plans shall be in compliance with the New Hampshire State Building Code and reflect any Planning Board and/or Zoning Board approvals and stipulations. Each plan set shall include the following *when applicable*:

- Plot – Plot plan showing proposed pool location, all structures on site, utilities, septic, etc.
- All pool wiring **must** comply with the National Electrical Code. (see below)
- All safety equipment including fences, gates, and alarms must be noted on the application.

As a minimum, plans sets shall note:

- Exterior dimensions of pool and average depth(s).
- Location of pool in reference to property lines.

SWIMMING POOL CODE REQUIREMENTS

An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded with a barrier which shall comply with the following:

A. The top of the barrier shall be at least 48 inches above grade. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier maybe at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be four (4) inches.

B. Openings in the barrier shall not allow passage of a four (4) inch diameter sphere.

C. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions.

D. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1 ¾ inches (44mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ inches in width.

E. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ inches in width.

F. Maximum mesh size for chain link fences shall be a 2 ¼ inch (57mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1 ¾ inches.

G. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1 ¾ inches.

H. Access gates shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device is located less than 54 inches from the bottom of the gate, the release mechanism and openings shall comply with the following:

1. The release mechanism shall be located on the pool side of the gate at least 3 inches below the top of the gate;
and
2. The gate and barrier shall have no opening larger than ½ inch within 18 inches of the release mechanism

I. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met.

1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346;
or
2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed in accordance with UL 2017. The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening. Deactivation shall last for not more than 15 seconds. The deactivation switch (s) shall be located at least fifty four (54) inches above the threshold of the door;
or
3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by item I.1 or 2 described above.

J. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure and the means of access is a ladder or steps:

1. The ladder or steps shall be capable of being secured, locked or removed to prevent access;
or
2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4 inch-diameter (102mm) sphere.

SWIMMING POOL WIRING

Based on the 2008 National Electrical Code - Article 680

I. Use No. 8 solid copper wire for bonding. Bond all metallic non-current carrying parts of a pool:

- Pool reinforcing steel. (An above-ground pool does not have Ladders re-enforcing rods, so you will need to bond the circulating pump Diving board to one metal pool support.)
- Circulating pump motor
- Metal conduits
- Metal junction boxes
- Lighting fixtures
- Pool heaters

II. PVC or conduit must be used as a raceway for underwater lights and must terminate in a service panel board or remote panel board.

An insulated green wire (not smaller than No. 12 wire) must be used for the equipment ground - unbroken.

III. Underwater lights over 15 volts must have ground-fault circuit-interrupter (GFI) protection.

IV. The circulating pump must have GFI protection - 120 volts, only if an outlet is used.

If an outlet is used to feed the circulating pump: A single outlet must be used and must be of the locking and grounding type. A rain-tight outlet cover (not your standard weatherproof cover) must be used so the outlet will remain weatherproof with the plug inserted.

If the circulating pump is hardwired: A switch and ground fault protection are required (120 or 240 volt, single phase).

V. An outside outlet must be installed not less than 6 feet and not more than 20 feet from the edge of the pool. (The 20 feet rule can vary some). GFI protection is required for this outlet.

VI. Single family dwellings: PVC or conduit must be used from the dwelling to the outlet or switch at the pump. The PVC or conduit must be buried at least 18 " . Expansion joints must be used at both ends. Romex may be run from the electrical panel to a weather proof box on the exterior of the dwelling.

VII. Other than storable pools, the flexible cord shall not exceed 3 feet in length and shall have a copper equipment grounding conductor not smaller than No. 12 wire.

VIII. In-ground metal pool: If the pool is of metal construction and suitably welded or bolted together, only one bonding connection needs to be made to the pool from the circulating pump.

IX. Do not use Romex or UF cable in PVC or conduit. Romex may be used inside single-family dwellings only.

X. Ground rods are not required by code for any pool.

XI. The cord from the pump to the outlet must be a No. 12/2 AWG wire with a twist lock cord cap and a weatherproof connector for the pump. If not, it is a code violation.

XII. Read the National Electrical Code for finer points!

ADOPTED CODES FOR ALL RESIDENTIAL STRUCTURES

In accordance with RSA 155-A this department will be enforcing the State of New Hampshire Building Code (with applicable state amendments) to recognize the following codes by reference:

1. **Residential** construction: (1&2 Family Dwellings and Townhouses):
International Residential Code (IRC) 2009 Edition
2. **Energy Conservation:** *International Energy Conservation Code 2009 Edition*
3. **Plumbing** including renovations and alterations: *International Plumbing Code (IPC) 2009 Edition*
4. **Mechanical** including HVAC and Ductwork: *International Residential Code (IRC) 2009 Edition Chapters 12 – 23.*
5. **Electrical** work including renovations and alterations: *National Electrical Code (NEC) 2014 Edition*
6. **Gasfitting** including renovations and alterations: *NFPA 54 Fuel Gas Code*

RESIDENTIAL WORK NOT REQUIRING A PERMIT:

BUILDING:

- Fences not over 6 feet high.
- Sheds 200 square feet and under (provided that the zoning regulations for setbacks, wetlands/buffers, etc. are complied with).
- Retaining walls that are not over 4 feet in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge (driveway, upward slope, structure).
- Painting, papering, tiling, carpeting, cabinets, countertops and similar finish work.
- Prefabricated swimming pools that are less than 24 inches deep.
- Swings and other playground equipment.
- Window awnings supported by an exterior wall which do not project more than 54 inches from the exterior wall and do not require additional support.

ELECTRICAL:

- Listed cord and plug connected temporary decorative lighting.
- Reinstallations of attachment plug receptacles but not the outlets therefore.
- Replacement of branch circuit overcurrent devices of the required capacity in the same location.
- Electrical wiring, devices, appliances, apparatus or equipment operating at less than 25 volts and not capable of supplying more than 50 watts of energy.
- Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

GAS:

- Portable heating and cooking appliances.
- Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
- Portable fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

MECHANICAL:

- Portable heating appliances.
- Portable ventilation appliances.
- Portable cooling units.
- Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.
- Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
- Portable evaporative coolers.
- Self contained refrigeration systems containing 10 pounds or less of refrigerant or that are actuated by motors of 1 horsepower or less.
- Portable fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

PLUMBING: The stopping of leaks in drains, water, soil, waste or vent pipe; provided, however, that if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in the code. The clearing of stoppages or the repairing of leaks in pipes, valves, or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

EMERGENCY REPAIRS: Where equipment replacement and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the building official.

ORDINARY REPAIRS: Application or notice to the building official is not required for ordinary repairs to structures, replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles. **Such exempted repairs shall not include** the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; **nor shall ordinary repairs include** addition to, alteration of, replacement or relocation of any water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring or mechanical or other work affecting public health or general safety.