



BUILDING STANDARDS ADVISORY

Dwelling Units	Approved by <i>Margaret Kuzylek</i>	Advisory Number A-16 Page 1 of 6
	Effective Date March 2001	NBC 1995 References(s) Part 9

Compliance with *The Uniform Building and Accessibility Standards Act* (the UBAS Act) and regulations is addressed in this advisory. NBC 1995 means the National Building Code of Canada 1995 as adopted by regulations under the UBAS Act. Words in italics, other than Act titles, are defined in the NBC 1995.

The NBC 1995 regulates construction of houses in Saskatchewan. The NBC sets minimum provisions for fire-, health-, and structure-safe construction of houses. The NBC is enforced by local authorities and building officials. Requirements for gas safety, electrical safety, plumbing safety, and operational fire safety in houses are set in other Saskatchewan regulations and codes. Building features where these other requirements interact with the NBC 1995 are noted below.


This advisory contains a basic description of NBC 1995 requirements that apply to one-unit, standalone houses that are not used for other purposes (day care, personal care, home business, etc.). Related building code clause numbers are shown in brackets, i.e. [9.32.2.1.]. Metric measurements govern and imperial measurements are shown only for guidance. Users should note that these are minimum requirements. Use of designs, products, materials, construction methods, etc. that exceed these requirements is encouraged, depending on consumer preferences. Users must consult the NBC 1995 as adopted and amended for use in Saskatchewan, for additional requirements, complete descriptions, and exceptions.

Structural Adequacy [9.3., 9.4., 9.12.–9.17., 9.23.]

- Structural elements in houses may be selected from tables in the NBC (dimensional lumber, non-loadbearing steel studs, lintels, glu-lam and steel beams), be pre-engineered (I-joists, truss joists, trusses, steel teleposts), or be designed by structural engineers or other competent *designers*. Conventional wood-frame construction is described in detail. [9.4., 9.23.]
- Structural wood elements must be grade stamped (dimensional lumber) or certified (manufactured wood products such as plywood and OSB). Non-stamped or non-certified lumber cannot be used in structural applications unless approval is obtained. [9.3.2.]
- Concrete mixes for unreinforced applications may be selected from tables in the NBC. Reinforced concrete must be designed. [9.3.1.]
- Design of houses must take into account the local snow load, wind load, *soil* bearing capacity, water table, and *soil* gases. [9.4.]
- *Foundations* and footings must meet specified requirements for excavation, size, materials, installation, drainage, and bearing materials. [9.4., 9.12.–9.15.]
- Wood *foundations* must comply with the CSA standard S406 “Construction of Preserved Wood Foundations,” or be designed by a structural engineer. [9.15.1.3.]
- Non-structural floors-on-ground must meet specified requirements for materials, drainage, and materials beneath. [9.16.]
- Requirements for steel, wood, unit masonry and solid concrete columns are described. [9.17.]
- All structural elements that are not specifically described by the NBC must be designed. [9.4.1.]



BUILDING STANDARDS ADVISORY

Dwelling Units	Approved by 	Advisory Number A-16 Page 2 of 6
	Effective Date March 2001	NBC 1995 References(s) Part 9

Building Envelope [9.13., 9.25.–9.28., 9.32.]

- Walls, floors, and roofs that separate the indoors from the outdoors need to be insulated to prevent condensation on the interior surface and to provide comfortable conditions for the occupants. [9.25.2.]
- *Air barrier systems* and *vapour barriers* are required in insulated walls, floors and roofs. [9.25.3., 9.25.4.]
- Exterior cladding and roofing materials must prevent the entry of rain and snow into the *building*. Flashing is required in roofs at valleys, at intersections of materials, and around *chimneys*. [9.26., 9.27., 9.28.]
- Openings through exterior walls and roofs must be covered, filled, and sealed as necessary to prevent entry of climatic elements (especially water), insects, and pests. [9.26., 9.27.2., 9.32.3.]
- Walls and floors below grade generally must be dampproofed, waterproofed, and sealed to prevent entry of water and *soil* gases. [9.13.]

Circulation [9.5.–9.9.]

- A door is required on entrances to the house and on each room with a toilet. [9.6.2.]
- *Barrier-free* access is not required. [9.5.2.1., 3.8.1.1.]
- Entrance doors and doors between a garage and the house require hardware that improves resistance to forced entry. [9.6.8.]
- A house typically requires only one exterior *exit* door. If it is necessary to travel more than one *storey* to reach the level served by the *exit* door, additional doors or large openable windows must be provided. [9.9.9.]
- Bedrooms must have a window that can be opened to a size that permits a person to go through, to provide an alternate means of escape in case of an emergency. [9.7.1.3.]
- Stairs must have a uniform rise in the range of 125-200 mm (5-8") and uniform run in the range of 210-355 mm (8-14"), with tread depth in the range of 235-355 mm (9-14"). Landings must be as wide and long as the width of the stairs, but are not required to be more than 1 100 mm (43") long. [9.8.]
- Handrails are required on at least one side of interior stairs that have more than 2 risers, and exterior stairs with more than 3 risers. Handrails must be located between 800-965 mm (31-38") above the nosing, and be continuous through the entire flight of stairs. If stairs are not next to a wall, they must be protected with a *guard* to at least 900 mm (36") above the nosing, with no opening in the *guard* that would permit the passage of a 100 mm (4") sphere, and designed to prevent climbing. *Guards* are required on open sides of exterior stairs when there are more than 6 risers. [9.8.7., 9.8.8.]
- *Guards* as described for stairs, are required around openings in floors at the tops of stairs and interior balconies, and at landings where they are more than 600 mm (24") above the adjacent floor level. *Guards* around exterior decks, porches, landings, and balconies must meet the same requirements, except that they must be at least 1 070 mm (42") high if the surface is more than 1 800 mm (6') above the adjacent surface. [9.8.8.]



BUILDING STANDARDS ADVISORY

Subject Dwelling Units	Approved by <i>Margaret Kuzylek</i>	Advisory Number A-16 Page 3 of 6
	Effective Date March 2001	NBC 1995 References(s) Part 9

Room Dimensions [9.5.]

- No minimum room sizes are specified.
- Hallways are required to be 860 mm (34") wide in most cases. [9.5.4.]
- Most rooms in houses require a ceiling height of 2.3 m (7' 7"), although bathrooms, laundry areas, entryways and halls may have a height of only 2.1 m (6' 11"), and unfinished *basements* may have a height of only 1.95 m (6' 5"). [9.5.3.]

Windows and Glass [9.6., 9.7., 9.32.]

- Bedroom windows usually serve three purposes in a house: for natural light, for natural ventilation and for a means of escape during an emergency. They must meet certain size requirements to serve each purpose. [9.7.1.3., 9.7.1.2., 9.32.2.2.]
- All windows must meet specified standards for strength, airtightness, and watertightness. [9.7.2.]
- Windows within 2 m (6' 7") of the ground must provide resistance to forced entry. [9.7.6.]
- Glass enclosures for bathtubs and showers must be safety glass. [9.6.6.5.]
- Glass in doors and sidelights must be tempered or laminated safety glass or wired glass. [9.6.6.2.]
- Mirrored glass doors may only be used at the entrance to clothes closets. [9.6.6.3.]

Fire Separations [9.10.]


- Walls in a house are generally not required to be *fire separations* or have a minimum *fire-resistance rating*. However, walls located less than 1.2 m (4') from property lines or from other *buildings* (except garages and sheds associated with the house) must have a *fire-resistance rating* of at least 45 minutes and have no windows. Usually Type X drywall is used to provide a *fire-resistance rating*. [9.10.14.]
- *Service rooms* do not have to be enclosed by a *fire separation*. [9.10.10.1.]
- The wall between an attached garage and a house does not need to be a *fire separation*, but it must provide an effective barrier to gas and exhaust fumes and connecting doors must be tight-fitted, weather-stripped, and have a self-closing device. The connecting door cannot be located in a bedroom. [9.10.13.15., 9.10.9.16.]
- *Combustible* walls and cabinets must not be located within 750 mm (30") above or 450 mm (18") beside burners of a gas or electric range, unless they are protected. [9.10.21.]

Fire Detection [9.10.18.]

- *Smoke alarms* are required on each floor level in a house including a *basement*. [9.10.18.1., 9.10.18.2.]
- Every bedroom door must have a *smoke alarm* located within 5 m (16') of the door. Every location on a floor level must be within 15 m (49') of a *smoke alarm* on the same level. Where one alarm on



BUILDING STANDARDS ADVISORY

Subject Dwelling Units	Approved by 	Advisory Number A-16 Page 4 of 6
	Effective Date March 2001	NBC 1995 References(s) Part 9

a level cannot be located to satisfy these requirements, additional alarm(s) will be required on that level. [9.10.18.2.]

- *Smoke alarms* must be installed on or near the ceiling, hard-wired to an electrical circuit, and interconnected so that when one unit alarms they all sound. Battery operated *smoke alarms* may be permitted if the house is not served by electric power, if the house was built under a previous edition of the NBC, or if the alarms are in addition to the required hard-wired alarms. [9.10.18.2., 9.10.18.3., 9.10.18.4.]
- Instructions for care and maintenance of *smoke alarms* must be posted in a convenient location. [9.10.18.5.]

SEE LOCAL FIRE OFFICIALS REGARDING THE NATIONAL FIRE CODE OF CANADA AND BYLAW REQUIREMENTS FOR MAINTENANCE OF SMOKE ALARMS AND INSTALLATIONS IN EXISTING DWELLING UNITS.

Interior Finishes [9.10., 9.29., 9.30.]

- The surface of walls and ceilings must have a *flame-spread rating* not more than 150, except that doors, and walls and ceilings in bathrooms are permitted to have a rating up to 200. In general, asbestos cement board, brick, concrete, tile, steel, copper, aluminum, 9.5 mm ($\frac{3}{8}$ ") drywall, 16 mm ($\frac{5}{8}$ ") lumber, and 11 mm ($\frac{7}{16}$ ") plywood and particleboard, all have a *flame-spread rating* not more than 150. [9.10.16.]
- Waterproof finish is required in shower stalls and bathtubs. [9.29.2.]
- Finished flooring is required. [9.30.1.]
- Water resistant flooring is preferred in bathrooms, kitchens, and laundry areas. [9.30.1.]

Crawl Spaces [9.18.]

- Crawl spaces must have access openings, ventilation, drainage, and ground cover. [9.18.2.–9.18.6.]
- Crawl spaces can only be used as warm air plenums under 1 *storey* portions of houses. [9.18.7.]

Roof Spaces [9.19.]


- Roof spaces must have access openings and ventilation. [9.19.]

Sanitation [9.31.]

- Where a piped water supply is available:
 - a kitchen sink, bathroom sink, bathtub or shower, and toilet are required [9.31.4.], and
 - a hot water supply must be provided [9.31.4.], and
 - piping for hot and cold water shall be connected to every kitchen sink, bathroom sink, bathtub, shower, slop sink, and laundry area. [9.31.3.]
- A space for laundry facilities is required. [9.31.4.]



BUILDING STANDARDS ADVISORY

Subject Dwelling Units	Approved by 	Advisory Number A-16 Page 5 of 6
	Effective Date March 2001	NBC 1995 References(s) Part 9

- Where gravity drainage is possible, a floor drain is required in the *basement*. [9.31.4.]
- Wastes from plumbing fixtures must be piped to a *building sewer*. The *building sewer* must discharge to a public sewage system, where available, or to a *private sewage disposal system*. [9.31.5.]

SEE LOCAL PUBLIC HEALTH INSPECTORS REGARDING THE NATIONAL PLUMBING CODE OF CANADA AND SASKATCHEWAN REQUIREMENTS FOR PLUMBING, WATER SUPPLY, AND SEWAGE SYSTEM INSTALLATIONS. THE WATER DISTRIBUTION SYSTEM MUST BE CONNECTED TO A PUBLIC WATER MAIN OR A PRIVATE POTABLE WATER SUPPLY SYSTEM. THE SANITARY DRAINAGE SYSTEM MUST BE CONNECTED TO A PUBLIC SANITARY SEWER, A PUBLIC COMBINED SEWER, OR A PRIVATE SEWAGE DISPOSAL SYSTEM.

Ventilation and Heating [9.32., 9.33.]

- Natural or mechanical ventilation is required in the summer. Mechanical ventilation is required for the remainder of the year, if the house is supplied with electrical power. [9.32.1.]
- Mechanical ventilation systems can be part of, or separate from, forced-air heating systems and must be designed and adjusted to prevent back-drafting of *chimneys*. [9.32.3.]
- During the winter, heating systems must be able to maintain indoor air temperatures at not less than 22°C in all living spaces, 18°C in unfinished *basements*, and 15°C in heated crawl spaces. [9.33.3.]
- Heating *appliances*, including *furnaces*, stoves, *ranges* and space heaters, must be installed in compliance with appropriate natural gas, propane, solid-fuel, and electrical standards. [9.33.4., 9.33.5.]

SEE LOCAL SASKPOWER GAS INSPECTORS REGARDING SASKATCHEWAN REQUIREMENTS FOR INSTALLATION AND MAINTENANCE OF NATURAL GAS, PROPANE, AND OIL-BURNING APPLIANCES. SEE LOCAL SASKPOWER ELECTRICAL INSPECTORS REGARDING SASKATCHEWAN REQUIREMENTS FOR INSTALLATION AND MAINTENANCE OF ELECTRICAL SYSTEMS AND EQUIPMENT.

Fireplaces, Chimneys and Other Solid-Fuel Burning Appliances [9.21., 9.22., 9.33.]

- Fireplaces and other solid-fuel burning *appliances* can be masonry, concrete or factory-built. [9.22.1., 9.22.8., 9.33.5.]
- *Chimneys* can be site-built brick masonry or concrete, or factory-built metal. *Chimneys* must be certified for use with the fireplace or appliance that is going to be used. [9.21.1.]
- Factory-built fireplaces, *chimneys*, and other solid-fuel burning *appliances* must be manufactured, certified and installed in conformance with appropriate national standards, such as those developed by the Canadian Standards Association (CSA) or Underwriters' Laboratories of Canada (ULC). [9.21.1., 9.22.8., 9.33.5.]

SEE LOCAL FIRE OFFICIALS REGARDING THE NATIONAL FIRE CODE OF CANADA AND BYLAW REQUIREMENTS FOR MAINTENANCE OF SOLID-FUEL BURNING APPLIANCES, AND INSTALLATIONS IN EXISTING DWELLING UNITS. IF ADDING A FIREPLACE OR OTHER WOOD-BURNING APPLIANCE TO AN EXISTING DWELLING UNIT, CHECK WITH THE INSURANCE PROVIDER FOR ADDITIONAL REQUIREMENTS.



BUILDING STANDARDS ADVISORY

Dwelling Units	Approved by <i>Margaret Kuzylek</i>	Advisory Number A-16 Page 6 of 6
	Effective Date March 2001	NBC 1995 References(s) Part 9

Electrical Facilities [9.34.]

- Electrical installations must meet the requirements of the electrical code. [9.34.1.]
- A lighting outlet controlled by a wall switch is required outside the entrance door, in kitchens, bedrooms, living rooms, utility rooms, laundry rooms, dining rooms, bathrooms, toilet rooms, vestibules, and hallways. [9.34.2.]
- Every stair shall be lighted and the lighting must be controlled by appropriately located switches. [9.34.2.]
- A lighting outlet with fixture must be provided in *basements*, storage rooms, garages, and carports. [9.34.2.]

SEE LOCAL SASKPOWER ELECTRICAL INSPECTORS REGARDING SASKATCHEWAN REQUIREMENTS FOR INSTALLATION AND MAINTENANCE OF ELECTRICAL SYSTEMS AND EQUIPMENT.

Seasonally or Intermittently Occupied Dwellings [9.1., A-9.1.1.1.]

- Although seasonally or intermittently occupied dwellings must generally meet all the requirements of the NBC, it may be reasonable to waive some requirements, such as:
 - Dwellings not provided with heat may not need insulation, *air barrier systems*, and *vapour barriers*.
 - Dwellings not attached to other units and remote from other *buildings* may not need interior finishes other than where waterproof finishes are needed.
 - Plumbing fixtures are required only where a piped water supply is available.
 - Electrical facilities are required only where electrical services are available.

For prices and order forms for *The National Building Code of Canada 1995* (and other national model codes) call the National Research Council of Canada in Ottawa at 1-800-672-7990.

The National Housing Code of Canada 1998 and Illustrated Guide includes portions of the NBC 1995 that apply to one and two unit dwellings along with illustrations, explanations, and suggestions about compliance with the code requirements. The Saskatchewan version also includes a copy of *The Uniform Building and Accessibility Standards Act* and regulations. For prices or order form for the Saskatchewan version, call the Saskatchewan Home Builders' Association in Regina at (306) 569-2424 or fax (306) 569-9144. The national version is available from the National Research Council of Canada.