# Detached Garage & Accessory Building

**Project Guide** 





# **DETACHED GARAGE/ACCESSORY BUILDING**

## Applicable to:

- Detached garages and accessory buildings serving one unit, two unit and semi-detached dwellings.
- Detached garages on group dwelling sites where the size and location of garage has been previously approved as part of the site development. Note: all garages on GDS are required to submit the Project Application Information Form.

## The following items must be included in your application package:

Site Plan

- · Property lines
- · Streets and alleys
- · Outline of garage, home and other buildings on property
- · Dimensions of house and garage/accessory building
- · Dimensions from all property lines to garage
- · Location and size of windows and doors
- · Label direction of roof trusses
- Curb cuts/crossing (if applicable)

Submission Details Form

**Building Drawings** 

\*Required if design outside tables below or engineered drawings required

# Other requirements that may need to be included in your application package:

Engineered drawings (stamped drawings)

Required when design is outside Part 9 of the National Building Code

Structural commitment letter for field review

Required for a structural design completed by an engineer

Spray Foam Insulation Request Form

**Energy Efficiency Compliance Form** 

· Required for accessory buildings constructed as amenity spaces

# **SUBMISSION DETAILS FORM**

Complete the form below and submit with your application.

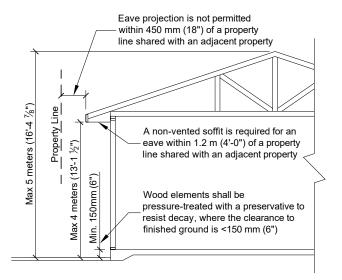
Dimensions of garage: W: m (ft) L: m (ft) Area of Garage:  $m^2 (ft^2)$ 

Area of Garage:  $m^2$  (ft<sup>2</sup> Height of garage: m (ft)

Wall height: m (ft)

## **FOUNDATION**

Size of foundation	Foundation type
55 m <sup>2</sup> or less (592 ft <sup>2</sup> )	100 mm (4") concrete slab
	Pressure Treated Mud Sill
	Other – please provide details on drawings
Greater than 55 m <sup>2</sup> (592 ft <sup>2</sup> )	Engineered Foundation required



#### **WALLS**

Wall Framing	Wall Sheathing	Exterior Finish	
2" x 4" @ 16" o.c.	3/8" OSB/Plywood	Vinyl Siding	
2" x 4" @ 24" o.c.	1/2" OSB/Plywood	Cement Board (e.g. hardi board)	
2" x 6" @ 16" o.c.	Fibreboard (meets CAN/ULC S706.1)	Stucco	
2" x 6" @ 24" o.c.	Gypsum Sheathing (meets	E.I.Fs	
Other - Provide details on drawings	ASTM C 1177 or ASTM C 1396) Other - Provide details on drawings	Other - Provide details on drawings	

Is your wall face within 0.6 m (2 ft) of property line? Yes No

\*If yes, 45 min fire resistance required on inside of face. 5/8" type X gypsum Other - Provide details on drawings

## **ROOF**

Roof Framing	Roof Sheathing	Roofing material	
Pre-manufactured engineered truss	7/16" OSB/Plywood	Asphalt Shingles	
Other - Provide details on drawings	1/2" OSB/Plywood	Metal roofing	
	Other - Provide details on drawings	Other - Provide details on drawings	

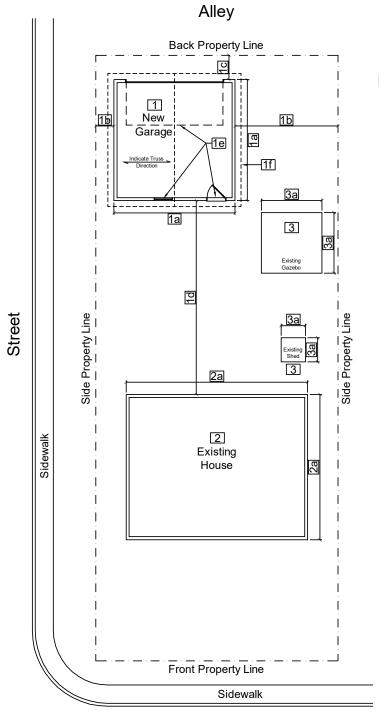
#### **BEAMS/LINTELS**

Garage door Beam			Lintel over window/doors						
Engineered Beam *Provide shop drawings on site			Engineered Beam *Provide shop drawings on site						
Built-up-beam		Built-up-beam							
Lumber:	2" x 6"	2" x 8"	2" x 10"	2" x 12"	Lumber:	2" x 6"	2" x 8"	2" x 10"	2" x 12"
# of plys					# of plys				
Length					Length				

# **INFORMATION PACKAGE**

To assist you in assembling your application, we have created sample site plan to reference

# **Sample Floor Plan**



# Details to be shown on plan:

- 1 Location of proposed garage
  - 1a Garage dimensions
  - 1b Distance to side property lines
  - 1c Distance to rear property line
  - 1d Distance to existing house
  - 1e Indicate Window & Door Locations & size
  - 1f Dimensions of eave overhangs
- 2 Location of existing house
  - 2a Existing house dimensions
- [3] Location of existing building / structures
  - 3a Existing building / structures dimensions

Street

# **ZONING REQUIREMENTS**

The size of your detached garage and/or accessory building(s) depends on the size of the primary dwelling unit, site coverage of all buildings and rear yard coverage.

#### **Definitions**

Accessory building or use means a building or use which:

- (i) serves the principal building or principal use;
- (ii) is subordinate in area, extent and purpose to the principal building or principal use served;
- (iii) contributes to the comfort, convenience or necessity of occupants of the principal building or principal use served;
- (iv) is located on the same site as the principal building or principal use served

Examples of accessory buildings – detached garage, shed, gazebos and/or amenity building(s).

**Setbacks:** The distances between a property line and the nearest wall or part of the structure. Setback requirements vary between different zones and existing site conditions.

**Rear yard area** means the area between the side site lines, and the rear site line to the closest projection of the rear building line (corner and interior).

**Site coverage** means that percentage of the site covered by buildings above grade level exclusive of marquees, canopies, balconies and eaves.

# **Development Standards**

Two ways to assist you in learning more about zoning and how to plan your project:

- Access the City of Saskatoon <u>CityMap</u> to determine your property's zoning, site area and additional details.
- 2) Using the Zoning Bylaw No. 8770 and finding the sections pertaining to your zoning district

The following information is provided to help guide the design for your accessory building(s). The following does not include all zoning requirement and some exceptions may apply.

	Main floor area of the dwelling (exclude area of an attached garage)	Maximum combined area of all accessory buildings	
Maximum floor area of	54 m <sup>2</sup> (581 ft <sup>2</sup> ) or less	54 m² (581 ft²)	
accessory building(s) on site	Between 54 m <sup>2</sup> (581 ft <sup>2</sup> ) and 87 m <sup>2</sup> (936 ft <sup>2</sup> )	Less than main floor area of the dwelling	
	Greater than 87 m <sup>2</sup> (936 ft <sup>2</sup> )	87 m <sup>2</sup> (936 ft <sup>2</sup> )	
Max. Rear yard coverage	30-50%**		
Max. Wall Height	4 m (13 ft) measured from grade to soffit		
Max. height of roof	5 m (16 ft 4 in) measured to highest point		
Max. number of Storeys	1 Storey		

<sup>\*\*</sup>See chart to determine your maximum rear yard coverage in the Zoning Bylaw No. 8770 Article 5.7 (c).

<sup>\*\*</sup>Rear yard coverage is not applicable to street townhouse or group dwelling sites.

Dwelling group sites are permitted a total site coverage of 45%.

<sup>•</sup> Street townhouse sites are permitted a total site coverage of 50%.

# **ZONING REQUIREMENTS**

## **Location restrictions**

A detached garage/accessory building:

- with a vehicle door facing rear lane must be 1.2 m (4 ft) from rear property line.
- must be at least 15.0 m (50 ft) from the front property line
- at least 1.2 m (4 ft) from the house
- be situated less than 0.75 m (2 ft 5 in) from any property line abutting a flanking street and less than 1.2 m (4 ft) from any portion of the principal building;
- on a corner site, no accessory building shall be erected in or encroach on the required side yard which is adjacent to the street

# **BUILDING CODE REQUIREMENTS**

# **Energy Efficiency (Section 9.36)**

Most garages and/or accessory buildings are not required to conform to the energy requirements in NBC.

If you are planning to build an accessory building that will serve as an amenity space and is heated, Energy Efficiency requirements apply. The <u>Energy Efficiency form</u> shall be completed and submitted with your application.

## **Foundation and Anchorage**

**Drainage (Article 9.14.6.1) -** The ground shall be sloped to drain water away from the building. Ensure new construction does not change existing surface flow.

Concrete strength (Clause 9.3.1.6.(1)(c)) - The compressive strength for concrete garage floors shall be at least 32 MPa.

**Slab thickness (Sentence 9.35.3.1.(2)) -** Concrete floor slabs shall be at least 100mm thick. NBC allows a 100mm thick concrete slab to be used when all of the following are met:

- · The garage is of light-frame wood construction (no masonry construction or brick cladding),
- · It is only one storey in height, and
- It is not more than 55 m2 (592 ft2) in building area

If these requirements are not met, the foundation must be engineered, or meet NBC Sections 9.12 and 9.15. For engineered foundations, the sealed design must include the anchorage.

Professional designs must be sealed by an architect or professional engineer registered in Saskatchewan. The design must be site specific and shall not be more than two years old.

If foundation is designed based on NBC Sections 9.12 and 9.15, all design information shall be provided on the drawings showing conformance to those Sections (requires excavating the foundation to the minimum depths in Table 9.12.2.2, properly sized footings, etc.).

**Anchorage (Article 9.35.4.3) -** This Article points to the anchorage requirements in NBC Subsection 9.23.6. The anchorage requirements from Code that are commonly used for detached garages, where a 100mm thick concrete slab is permitted, are:

- Sill plate to be fastened to the foundation with anchor bolts (≥12.7 mm diameter), and spaced at 2.4 m (8 ft) on center or less,
- Anchor bolts are to be embedded at least 100 mm (4 in) into the foundation (Note: therefore, the

# **BUILDING CODE REQUIREMENTS**

overall length of the bolt must be 100mm (4 in) embedment, plus the thickness of the sill plate, plus the thickness needed to fasten the nut and washers) and

 Must be designed to allow fastening of the nuts and washers without the anchor bolts withdrawing from the foundation.

## **Wood Decay Protection**

Structural wood elements shall be pressure-treated where the clearance between the wood member and ground level is less than 150 mm (6 in) (Sentence 9.3.2.9.(3)).

If wood members are not pressure treated and are supported by concrete that is in contact with the ground, they shall have a 2 mil (0.05mm) polyethylene film or Type S roll roofing in between the wood and the concrete support (Article 9.23.2.3).

#### **Exterior Wall Construction**

Construction of exposing building faces (Article 9.10.14.5)

• Detached garages and accessory buildings are allowed relaxations in the NBC for the construction requirements of the exterior walls with regards to type of construction (combustible vs noncombustible), fire-resistance rating and type of cladding (combustible vs noncombustible).

The following is a summary of the requirements for detached garages and accessory buildings.

#### Walls of detached garage facing property line or lane,

- Limiting distance ≥ 0.6 m (2 ft): when the horizontal distance measured from the exterior wall
  face to the property line is greater than or equal to 0.6m, then there are no requirements for type
  of construction, fire-resistance rating, or for type of cladding.
- Limiting distance < 0.6 m (2 ft): when the horizontal distance measured from the exterior wall
  face to the property line is less than 0.6 m (2 ft), then the wall shall have a fire-resistance rating of
  not less than 45 minutes. This rating is required to be provided for the entire face of that wall, along
  with any portions of wall directly above this wall that enclose an attic (if applicable). No additional
  requirements for type of construction or type of cladding</li>

**Wall stud height and spacing (Article 9.23.10.1) -** The size of lumber, the spacing and the height of studs shall conform to Table 9.23.10.1. Most commonly single-storey garages (only supporting the roof) are framed with:

Example Stud Size, Spacing, & Height for Simple Garages (supporting only a roof)				
Stud Size	Maximum Spacing (on centre)	Maximum Height		
38 x 89 mm (2 x 4)	600 mm (24in)	3.0 m (9 ft-10 1/ 8in)		
38 x 140 mm (2 x 6)	600 mm (24in)	3.0 m (9 ft-10 1/8 in)		
38 x 140 mm (2 x 6)	400 mm (16in)	3.6 m (11 ft-9 3/4 in)		

Designs beyond the scope of Part 9 require a professional engineer or architect to seal the design (e.g. tall walls).

# **BUILDING CODE REQUIREMENTS**

#### Top plates (Articles 9.23.11.13 & 14)

In most cases, a double top plate is required, the joints in the top plates are to be staggered at least one stud space, and plates are to be lapped and fastened at corner intersections.

#### Wall sheathing (Table 9.23.17.2.-A)

The type, grade and thickness of wall sheathing shall conform to Table 9.23.17.2.- A for the spacing of studs being used. Materials permitted for wall sheathing include, but not limited to, insulating fibreboard, gypsum sheathing, mineral fibre, rigid board, OSB, plywood. Ensure material meets the required material standard in Table 9.23.17.2.- A.

## Exterior membrane and cladding (Sections 9.27 and 9.28)

Sheathing membranes and cladding protect the exterior walls from precipitation. Most commonly, a sheathing membrane ("building wrap") is installed under the chosen cladding. Refer to Sections 9.27 and 9.28 for more details as needed.

## Roofing

## Roof sheathing (Table 9.23.16.7.-A)

The roof sheathing type, grade, thickness and edge support (H-clips) to conform to the requirements of this table.

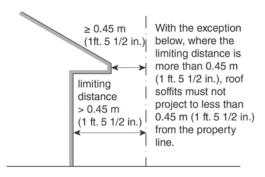
Roof slope and roofing type/provisions (Section 9.26)

- Roofing is to be provided to protect the building from precipitation. The type of roofing and installation shall conform to Section 9.26.
- A summary of slopes and applicable roofing types is shown in Table 9.26.3.1.

## **Soffits**

Minimum distance from property lines (Sentences 9.10.14.5.(9)-(11))

- The roof soffit is not permitted to be closer than 0.45 m (18 in.) from the property line. This means that if the garage wall is within 0.45 m(18 in) of the property line, no roof soffit is permitted.
- Where the wall faces a lane/street. the roof soffit is permitted to extend up to the property line (but not past the property line).



Non-vented soffit requirements (Sentence 9.10.14.5.(12))

 Where the roof soffit is less than 1.2 m (4 ft) from a property line or from the centerline of the lane/ street, the soffit shall not have any openings. Most commonly, unvented aluminum soffit is installed (NBC also permits 12.7 mm (1/2 in) gypsum soffit board, 11 mm (3/8 in) thick plywood, 12.5 mm (1/2 in) thick OSB or waferboard, or 11 mm (3/8 in) thick lumber).

# **BUILDING CODE REQUIREMENTS**

# **Trusses, Rafters, Lintels and Other Engineered Products**

**Pre-manufactured Trusses -** Pre-manufactured trusses require shop drawings to be provided to the on-site inspector.

• Gable end truss of the roof requires blocking/bracing to be installed at 600 mm (24 in) o.c. or less.

## Roof framing (rafters, joists and ridge beams – Section 9.23.14)

· All roof framing that consists of rafters, joists, and ridge beams must be detailed on the drawings.

#### Lintels, Built-up beams (Article 9.23.12.3)

- Lintels to be shown to meet the Part 9 span tables of the NBC, or they are required to be engineered.
- Where lintels span more than 3 m (9 ft 10 in), they shall be supported on each side by two trimmer studs (under the lintel) fasted to a king stud (beside the lintel). Spans less than 3m can be supported on each side by one trimmer fastened to a king stud.

## **Windows and Doors**

## Size of person door (Table 9.5.5.1)

The door size shall be at least 760 mm (2 ft 6 in) wide by 1980 mm (6 ft 6 in) high.

#### Windows and other glazing (Article 9.10.14.4)

- The maximum allowable area of glazed openings (how many windows you can have on a building face) varies based on the area of the building face and the distance to the property line (or centerline of lane/street).
- Windows are not permitted where it will be less than 1.2 m (4 ft) from the property line (unless the property line is adjacent to a street or lane).



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