

CITY OF STILLWATER BUILDING INSPECTION DEPARTMENT SPECIFICATIONS FOR DETACHED GARAGES

1. REQUIRED INFORMATION WHEN APPLYING FOR A PERMIT:

- a. Submit two (2) copies of a Certificate of Surveyor or two (2) copies of a site plan drawn to scale indicating the lot dimensions, the location and ground coverage area of existing structure(s), and the location and area of the proposed structure. Indicate the setbacks from property lines.
- b. Submit two (2) copies of drawings showing proposed designs and materials. Drawings shall be drawn to scale and shall include the following information:

Floor Plan - indicating proposed size, window and door openings, header sizes over openings, size, spacing and direction of rafter material.

Cross Section - indicating footage and floor design, wall and roof construction and materials used.

Elevations - front and side view, indicating height of structure.

- c. If truss roof system is to be used, submit 2 copies of stamped pre-engineered truss designs from manufacturer.

Examples of drawings to be provided are attached for use as a guide.

2. BUILDING CODE REQUIREMENTS:

a. FOUNDATION: (See attached slab design)

A "floating slab", up to a maximum of 1,000 square feet in area dependent upon allowable area per the City of Stillwater's Zoning Ordinance, may be poured provided the soil has a bearing capacity of at least 1,500 pounds per square foot. Remove all sod and root structures and other fibrous materials and cover with 4" sand fill. At the perimeter, form a haunch to thickened edge having a minimum vertical dimension at the exterior face of 12" with at least 6" projecting above the finished grade. The bottom of the haunch shall be at least 8" wide and then sloped upward to the bottom of the slab. Screed block shall be placed to provide for a minimum slab thickness of 3-1/2". The minimum concrete strength shall be at least

3,500 pounds per square inch (28 day strength). In cold weather, protect concrete from freezing when green.

When slab is over 200 square feet in area, provide with a minimum of reinforcement of 6 x 6 No. 10 gauge wire mesh. Overlap 6" splices and bend down into the edge of the slab at least 6". When slab is over 400 square feet in area, provide with 2 - #4 rerods around the perimeter of the slab.

- b. **SILL BOLTS OR STRAPS:** Foundation plates must be anchored to the foundation with not less than 1/2 inch diameter steel bolts or approved straps embedded at least 7" into the concrete and spaced not more than 6' apart. There must be a minimum of two bolts for each piece of sill plate with one bolt located with 12" of each end of each piece of sill plate. Anchor straps must be installed according to manufacturer's specifications.
- c. **SILL PLATES:** All foundation sill plates must be approved pressure-preservative-treated wood, heartwood of redwood, black locust or cedar.
- d. **WALL FRAMING:** Studs must be placed with their wide dimension perpendicular to the wall and not less than three studs must be installed at each corner of an exterior wall. Minimum stud size is 2" by 4" and spaced not more than 24" on center.
- e. **TOP PLATE:** Bearing and exterior wall studs need to be capped with double-top plates installed to provide overlapping at corners and at intersections with other partitions. End joints in double-top plates must be offset at least 24".
- f. **WALL SHEATHING, ROOFING AND SIDING:** Approved wall sheathing, siding and roof sheathing and roof covering must be installed according to the manufacturer's specifications. Wall sheathing may be required to have a weather-resistive barrier installed over the product prior to application of the siding product.
- g. **WOOD AND EARTH SEPARATION:** Wood used in construction located nearer than 6" to earth shall be treated wood.
- h. **ROOF FRAMING:** Size and spacing of conventional lumber used for roof framing depends upon the roof pitch, span, the type of material being used and the loading characteristics being imposed. Garages must be designed for the appropriate snow load in your area.

Rafters need to be framed directly opposite each other at the ridge. A ridge board at least 1" (nominal) thickness and not less in depth than the cut end of the rafter is required for hand-framed roofs. At all valleys and hops, there also needs to be a single valley or hop rafter not less than two inches (nominal) thickness and not less in depth than the cut of the rafter. Valley needs to be designed as a beam.

Rafters must be nailed to the adjacent ceiling joist to form a continuous tie between exterior walls when the joists are parallel to the rafters. Where not parallel, rafters must be tied by a minimum 1" by 4" (nominal) cross tie spaced a maximum 4' on center. Manufactured trusses are to be installed per the manufacturer.

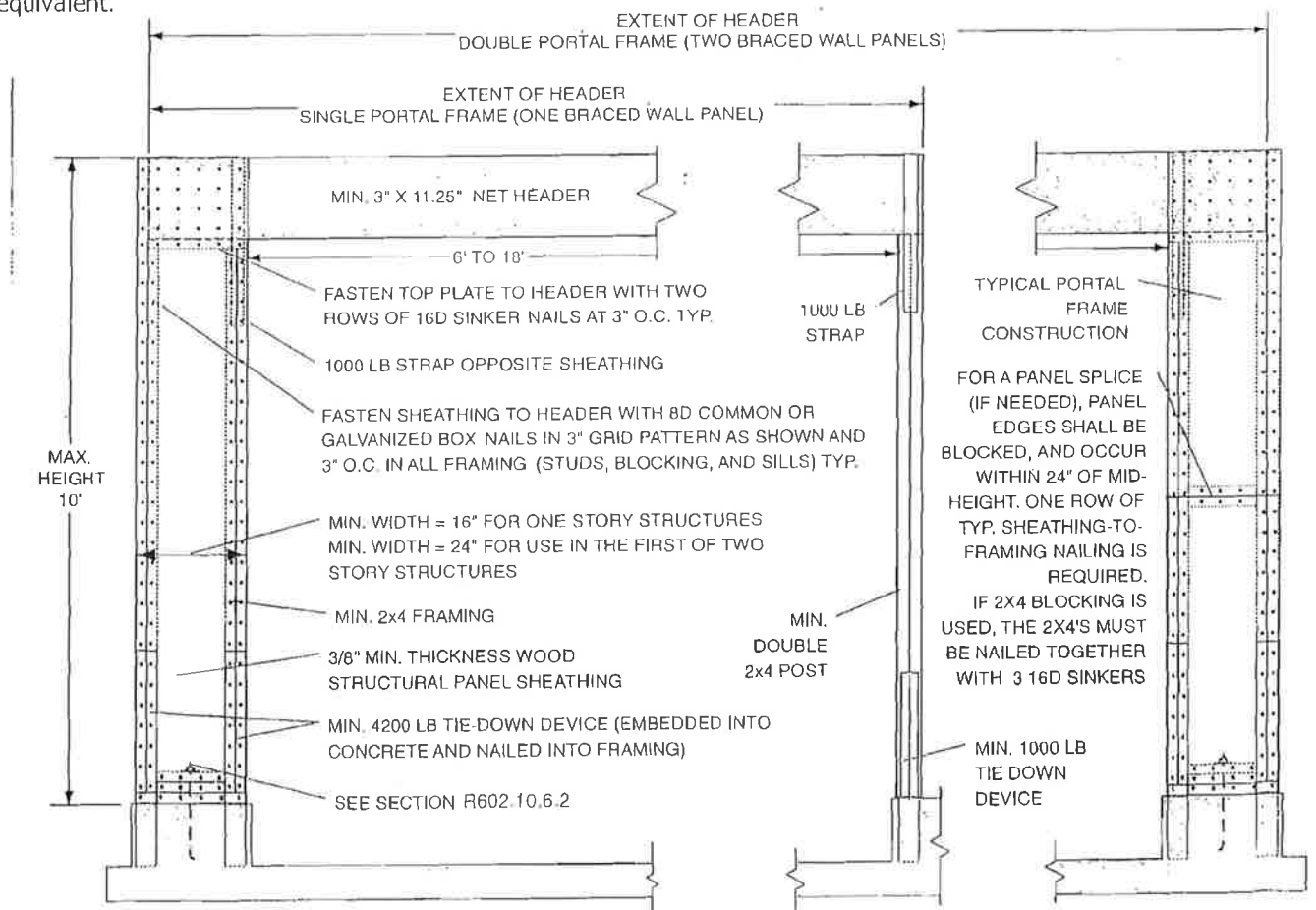
- i. **SEPARATION REQUIRED:** An attached garage shall be separated from the residence and its attic area by not less than 1/2 inch (12.7mm) gypsum board applied on the garage side. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall be protected by not less than 5/8" (15.9 mm) type "X" gypsum board or equivalent.

- j. **HEADERS:** Overhead door header shall be sized to accommodate load. May also need to follow braced wall requirements.

- k. **CONCRETE CURB BLOCK:** Concrete masonry curb blocks shall be at least 6" modular width (4" curb blocks are not permitted by code).

- l. **FIREWALL:** Garages within 6' of a dwelling shall be protected with materials approved for one-hour fire resistive construction. Doors shall be solid wood at least 1-3/8" in thickness or 20 minute steel door.

NOTE: When locating garage 6' or less from dwelling, 42" frost footings shall also be required.



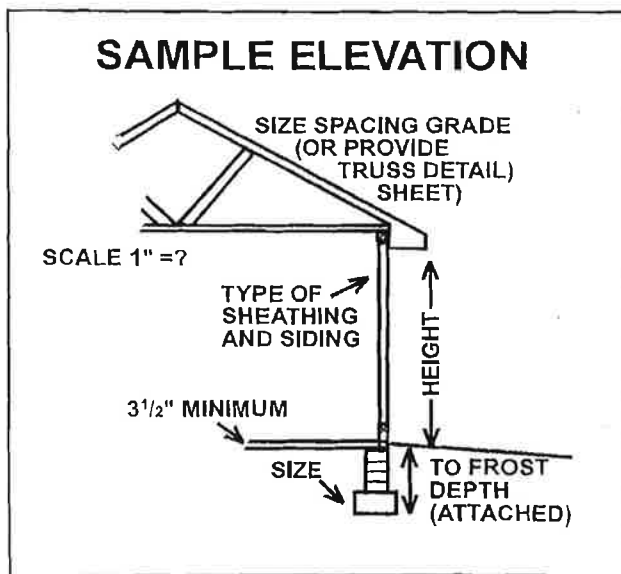
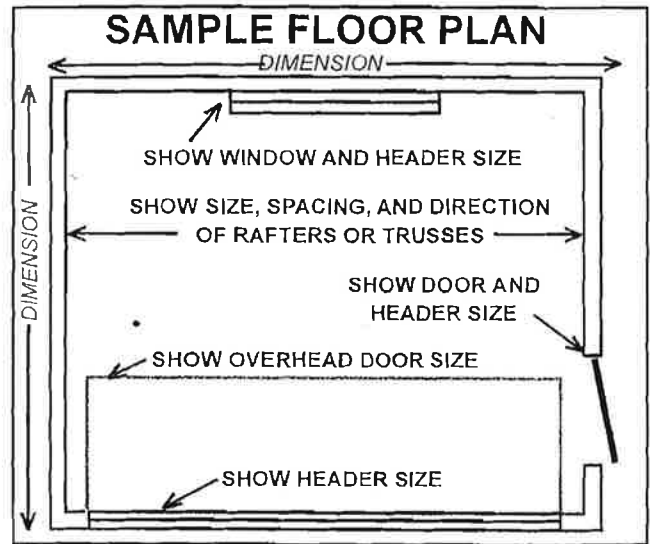
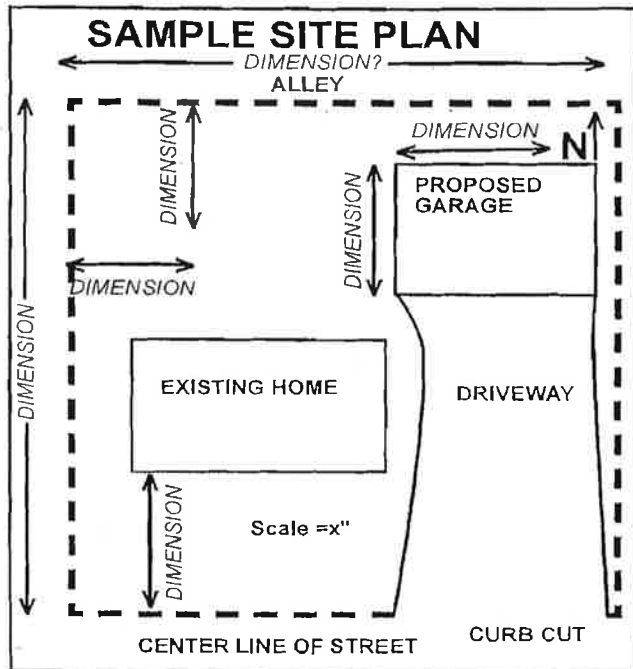
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 0.454 kg.

FIGURE R602.10.6.2
ALTERNATE BRACED WALL PANEL ADJACENT TO A DOOR OR WINDOW OPENING

Construction and Site Plans

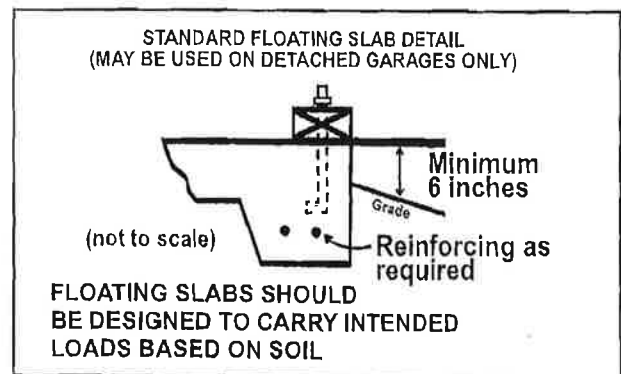
The following samples show the minimum detail expected on site, floor and elevation plans to ensure the permit process proceeds smoothly. Additional information such as sectional drawing or elevations may be required. The plans should include the following information:

1. Proposed size of garage
2. Location and size of door and window openings
3. Size of headers over all doors and window openings.
4. Size, spacing and direction of rafter (roof) materials.
5. Type (grade and specie) of lumber to be used.
6. Braced wall panels per R602.10.



ELEVATION:

1. Height of structure from grade.
2. Size and depth of footings.
3. Wall and roof construction.



REINFORCED THICKENED EDGE CONCRETE SLAB (Mono-Slab)

The use of a thickened edge slab as a foundation for a detached one-story accessory building (U-1 Occupancy) shall be in accordance with the following design requirements:

1. Ground shall be level.
2. Slab shall be placed on undisturbed soil or approved structural fill.
3. Slab shall not be used on organic soil, very soft soil, muck, or expansive soil.
4. Remove all sod and foreign matter under slab.
5. Trench entire perimeter, including doorways.
6. Slab shall not be used to support isolated columns.
7. Slab shall not be used as a foundation system for structural additions.
8. Maximum area of any slab for a one-story accessory building shall be 1,000 square feet.
9. See cross-sectional detail below.

Cross Sectional Detail

