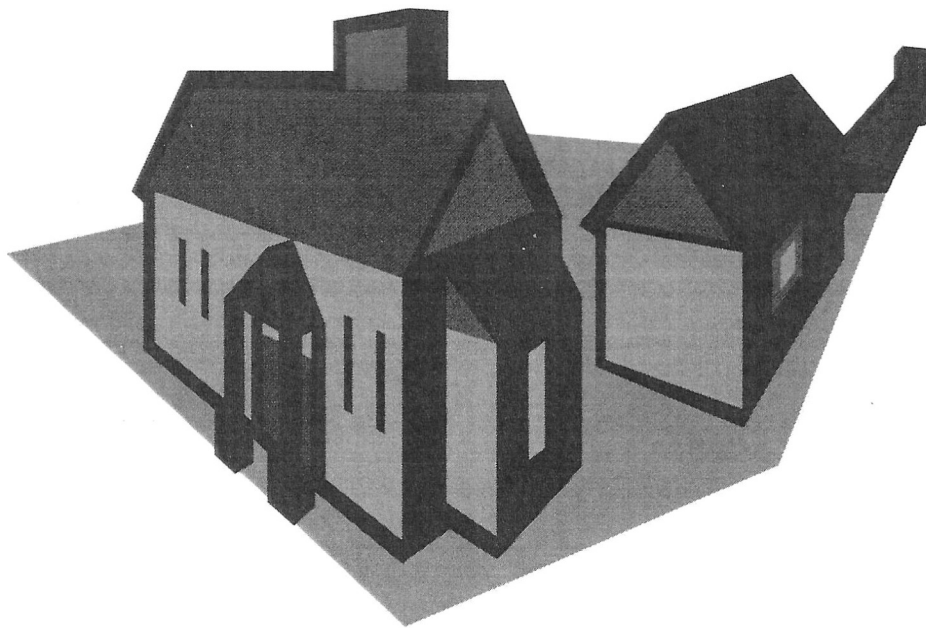


Detached Garages and Accessory Structures

Building Permit Information



Information in this booklet is a guideline and subject to change without notice.
Informational booklet last updated 04-2019.

City of New Haven • Building Department
573-237-2349

DETACHED GARAGE and ACCESSORY STRUCTURES

Building Permit Requirements

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The City of New Haven has adopted the following Building Codes as published by the International Code Council: International Building Code, 2015; International Residential Code, 2015; International Property Maintenance Code, 2015; International Plumbing Code, 2015; International Fire Code, 2015; International Mechanical Code, 2015; International Fuel Gas Code, 2015; National Electric Code, 2014.

Amendments to the 2015 International codes are available online at <https://www.ecode360.com/NE3373>.

All methods of construction and or materials used are subject to the approval by the building inspector.

This guideline is intended to provide the homeowner/contractor with the basic information needed to apply for a building permit to construct or erect a garage/utility shed. A permit is required for all sheds 120 sq. ft. or larger in size and for smaller sheds (less than 120 sq. ft.) placed on a permanent foundation or concrete slab on grade. Movable sheds less than 120 sq. ft. in size do not need a permit but must comply with City of New Haven Zoning setback requirements and shall be properly anchored to prevent displacement by wind.

1. Fill out and sign application for a building permit.
2. Submit two (2) separate copies of your plot (site) plan drawn to scale showing existing structures and the proposed garage/utility shed and its perpendicular distances to the lot lines and from other structures on the lot, if any. Site plans must show water run-off (use arrows to indicate flow of water). The location of the garage/shed cannot obstruct any drainage swales or natural run-off flows.
3. Calculate the size of the lot (square footage). Calculate all roof area on the lot (e.g. house, existing sheds, structures). The maximum amount of lot coverage (portion of the lot that is covered by buildings) is determined by zoning district.
4. All accessory structures are subject to the following:
 - a. Accessory structures may occupy a required rear yard but such accessory structures shall not be nearer than five (5) feet to any side or rear lot line.
 - b. If a garage is located closer than ten (10) feet to the main building; it shall be regarded as part of the main building for the purpose of determining the side and rear yards.
 - c. Any accessory structure that is not part of the main structure shall be located in the side or rear yard.
 - d. An accessory building or structure in a residential district shall not exceed 50% of the ground floor area of the principal building.
 - e. No accessory structure shall be constructed upon a lot until the construction of the main building has been actually commenced.
 - f. No more than two accessory structures shall be allowed on a lot.
5. Submit two (2) separate complete sets of detailed building construction plans drawn to scale containing the following:
 - a. Foundation and Floor Plans @ $\frac{1}{4}" = 1'$
 - b. Elevations @ $\frac{1}{4}" = 1'$
 - c. Building elevations @ $\frac{1}{4}" = 1'$
 - d. Sections and Details @ min. $\frac{3}{4}" = 1'$

5. Include one of the following in your plan submittal depending on choice of roof framing systems:
 - a. If by conventional method, indicate size and spacing of rafters, ceiling joists, and/or ties, on the sections and details included in the plans submitted.
 - b. If by the "truss" method, submit two (2) copies of the engineer's sealed truss plan that can be obtained from the lumber dealer or the "truss" fabricator. Trusses to comply with NFPA NDS-91 and TPI-85.

The following is a listing of common code requirements pertaining to most detached garages and accessory structures and information that needs to be included on the building construction plans.

FOOTINGS

- ❖ 1 – Story Minimum 20 inch wide x 8 inch thick

SLOPE: The top surface of footings shall be level. The bottom surface of footings shall not have a slope exceeding one unit vertical in 10 units horizontal, and shall be a minimum of 30 inches below grade.

MINIMUM REINFORCEMENT FOR FOOTINGS SUPPORTING WALLS:

Reinforce footings with a minimum of two (2) #4 continuous reinforcing rods spaced evenly and positioned on chairs 3-inch clear above the supporting soil. Connect wall to footing with L-Shaped vertical dowels spaced on 4-foot centers maximum along the wall centerline. Fabricate dowels from #4 minimum reinforcing rods with a horizontal leg, or hook measuring 8-inches minimum from the outside edge of the vertical leg, and with a vertical leg sized to extend a minimum of 4-inches to 5-inches into the footing and a minimum of 16-inches into the wall. Reinforcing steel shall be minimum grade 40.

Sheds larger than 120 sq. ft. in size must be erected on a permanent foundation system extending below the frost line (minimum 30" below finished grade). Generally, especially on larger sheds, a foundation wall around the building perimeter is required. Some smaller sheds, depending on the floor framing system, may be erected on concrete piers or piers under a thickened slab edge around the perimeter.

For prefabricated sheds, include two (2) copies of manufacturer's brochure and/or assembly instructions in addition to the above building construction plans.

NOTE: Many subdivisions have deed restrictions which prohibit utility sheds. Consult your subdivision trustees for any possible restrictions.

The preceding requirements apply to most detached utility shed projects; however, the Plan Reviewer may determine that unusual circumstance dictates the need for additional information on any particular project.

FOUNDATION WALLS

MINIMUM REINFORCEMENT SIZE AND SPACING FOR 8" REINFORCED CONCRETE FOUNDATION WALLS:

MAX. WALL HEIGHT
4 Feet

VERTICAL
#4 @4 Feet O.C.

HORIZONTAL
#4 @2 Feet O.C.

HEIGHT ABOVE FINISHED GRADE: Concrete and masonry foundation walls shall extend above the finished grade adjacent to the foundation at all points a minimum of 6 inches.

HEIGHT ABOVE FINISHED GRADE: Concrete and masonry foundation walls shall extend above the finished grade adjacent to the foundation at all points a minimum of 6 inches.

FOUNDATION ANCHORAGE: When braced, wall panels are supported directly on continuous foundations, the wall wood sill plate or cold-formed steel bottom track shall be anchored to the foundation in accordance with this section. The treated wood sole plate at exterior walls shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet on center.

Anchor bolts shall also be located within 12 inches from the ends of each plate section. Anchor bolts shall be at least ½ inch in diameter and shall extend a minimum of 7 inches into the masonry or concrete. A nut and washer shall be provided for each anchor and tightened tight to the sill plate.

CONCRETE

- ❖ Minimum thickness of concrete floor slabs supported directly on the ground is 3 ½". The slab shall be placed over a minimum four (4) inches base course of gravel or crushed stone.
- ❖ Minimum compressive strength of concrete shall be:
 - a. 2500 psi – floor slabs
 - b. 3000 psi – foundation walls and footings
- ❖ Concrete for all foundation walls shall be air-entrained.

FRAMING and SHEATHING

- ❖ Exterior walls to be a minimum of 2x4's @ 16"o.c. or 2x6's @ 24"o.c. Size of wood headers and steel lintels shall be indicated over each opening in the exterior wall.
- ❖ Specify an approved wall sheathing material or indicate method of bracing to resist lateral loads.
- ❖ Provide your choice of exterior siding and install as per manufacturer's requirements.
- ❖ For conventional framed roof systems, indicate size, spacing, fiber stress, type and grade of wood for roof rafters and ceiling joists. Indicate roof pitch. Show rafter and ceiling joist-framing layout on plans.
- ❖ Trussed roofs shall have sealed truss plans indicating spacing and roof pitch.
- ❖ All roof framing shall be designed to support a 20 PSF snow load and a 90 MPH wind speed.
- ❖ Roof Sheathing: Where trusses or rafters are spaced 24 inches o.c. roof panel sheathing shall be a minimum of ½ inch thick edge support. Edge support shall be tongue-and-groove edges, panel edges, panel edge clips (at mid-point between each support or 2x lumber blocking).

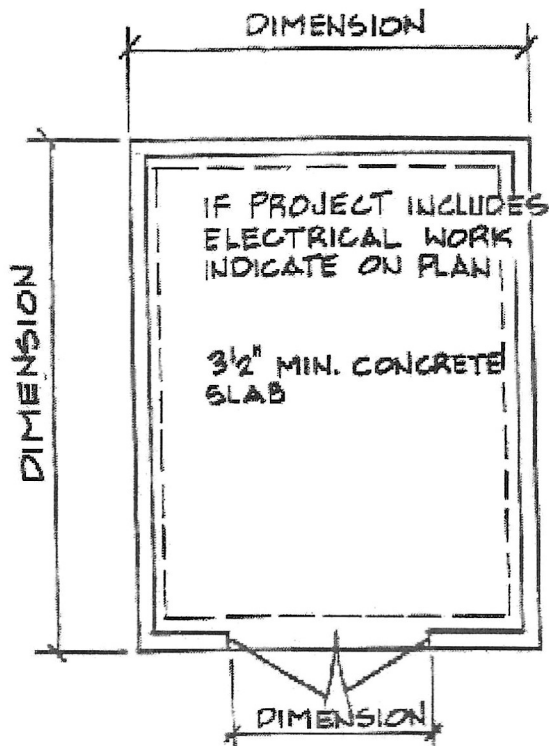
ROOFING

- ❖ All underlayment to be minimum type 15 asphalt felt.
- ❖ Asphalt roll roofing installed on a roof of less than 3:12 shall be applied parallel to the eaves. It shall not be installed on roof slopes below 1:12.
- ❖ Asphalt and fiberglass shingles shall be laid with a single-layer of underlayment applied in shingle fashion over the entire roof for all roof slopes. Asphalt shingles shall not be installed on roof slopes below three units vertical in 12 units horizontal (3:12).

ELECTRICAL

- ❖ All electric shall be installed as required by National Electrical Code 2014 Edition.
- ❖ Electric receptacles (if proposed) shall be ground fault circuit interrupter type.
- ❖ The preceding requirements apply to most garage additions and accessory structures; however, the plan reviewer may determine that unusual circumstances dictate the need for additional information on any particular project.

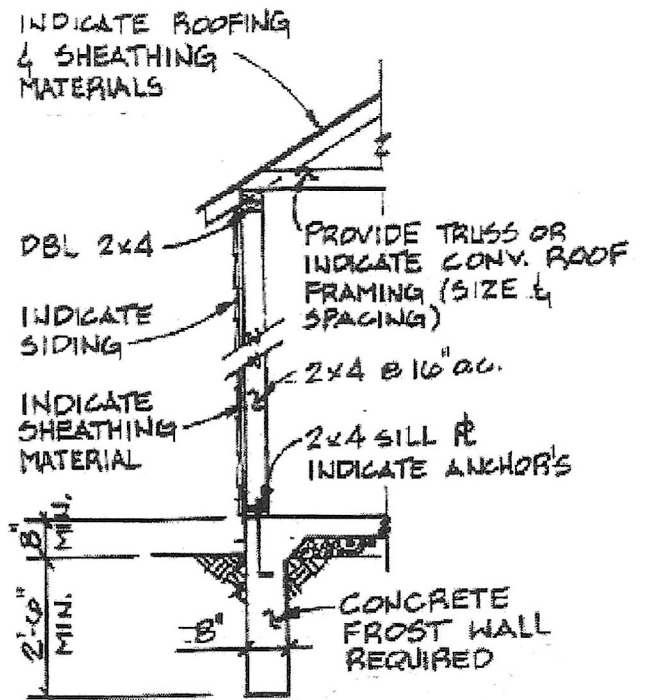
Refer to the attached drawings for additional information and requirements that need to be included on the building construction plans.



FOUNDATION & FLOOR

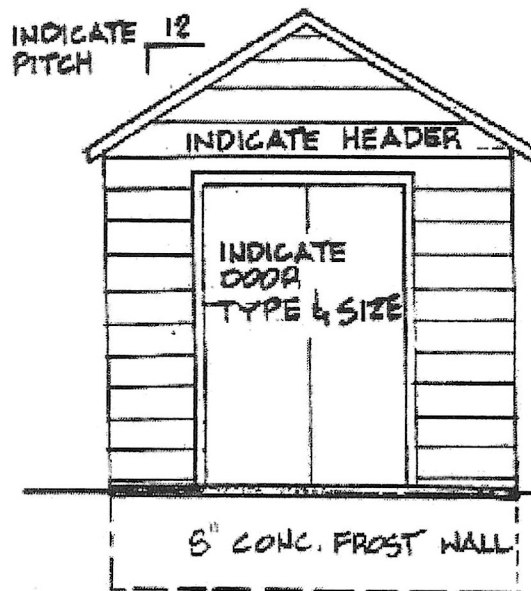
PLAN

SCALE: 1/4" = 1'-0"



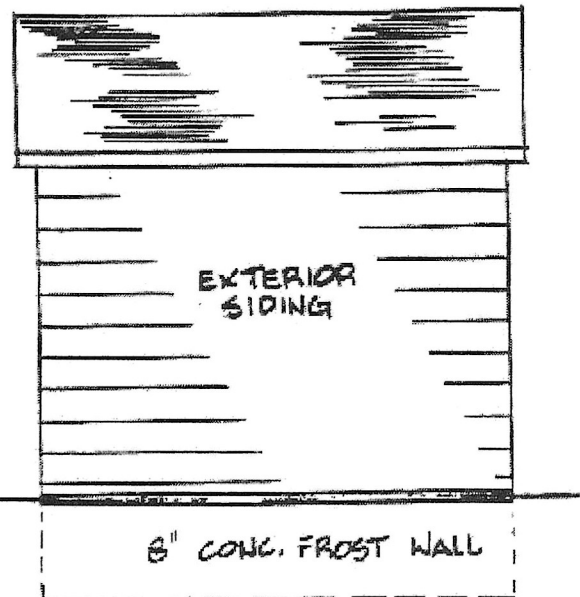
TYPICAL WALL SECTION

SCALE: 3/4" = 1'-0"



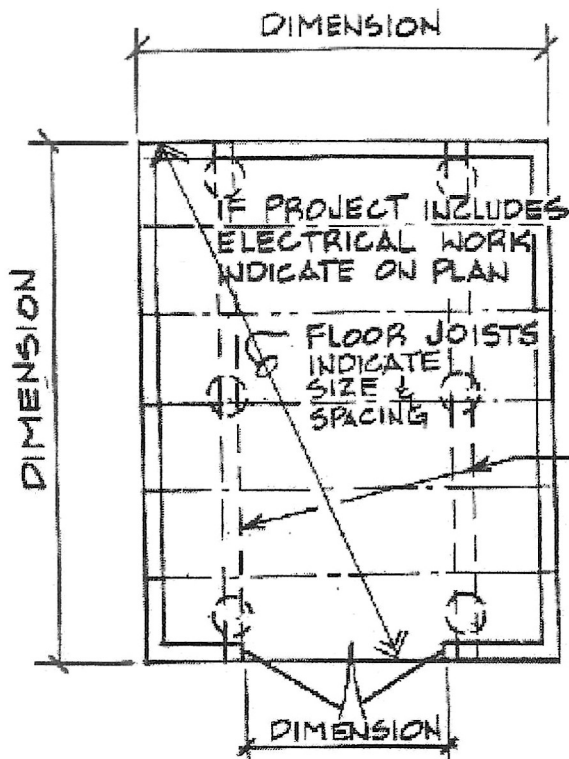
FRONT ELEVATION

SCALE: 1/4" = 1'-0"



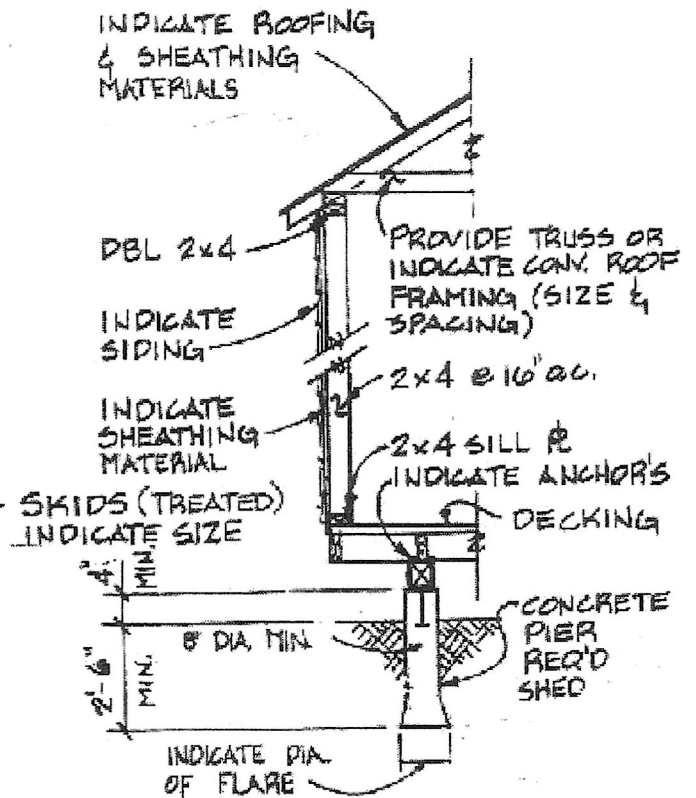
SIDE ELEVATION

SCALE: 1/4" = 1'-0"



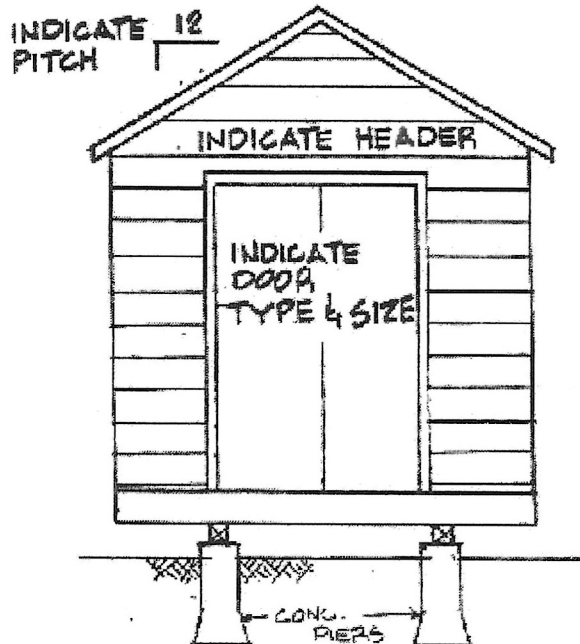
FOUNDATION & FLOOR PLAN

SCALE: $\frac{1}{4}" = 1'-0"$



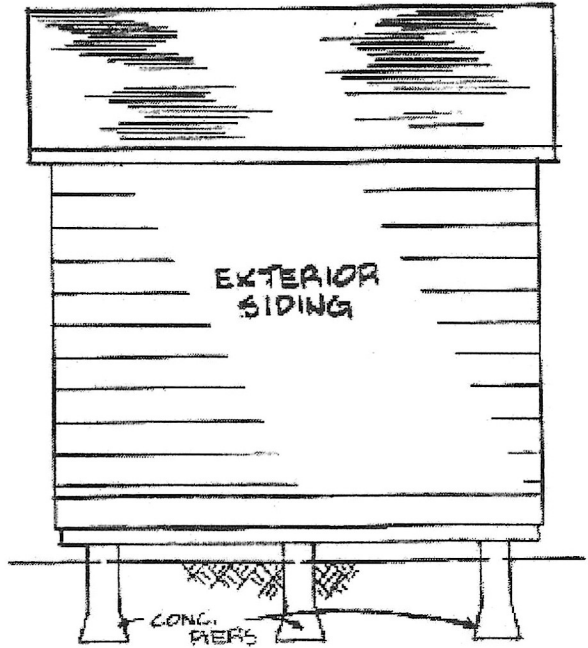
TYPICAL WALL SECTION

SCALE: $\frac{3}{4}" = 1'-0"$



FRONT ELEVATION

SCALE: $\frac{1}{4}" = 1'-0"$



SIDE ELEVATION

SCALE: $\frac{1}{4}" = 1'-0"$