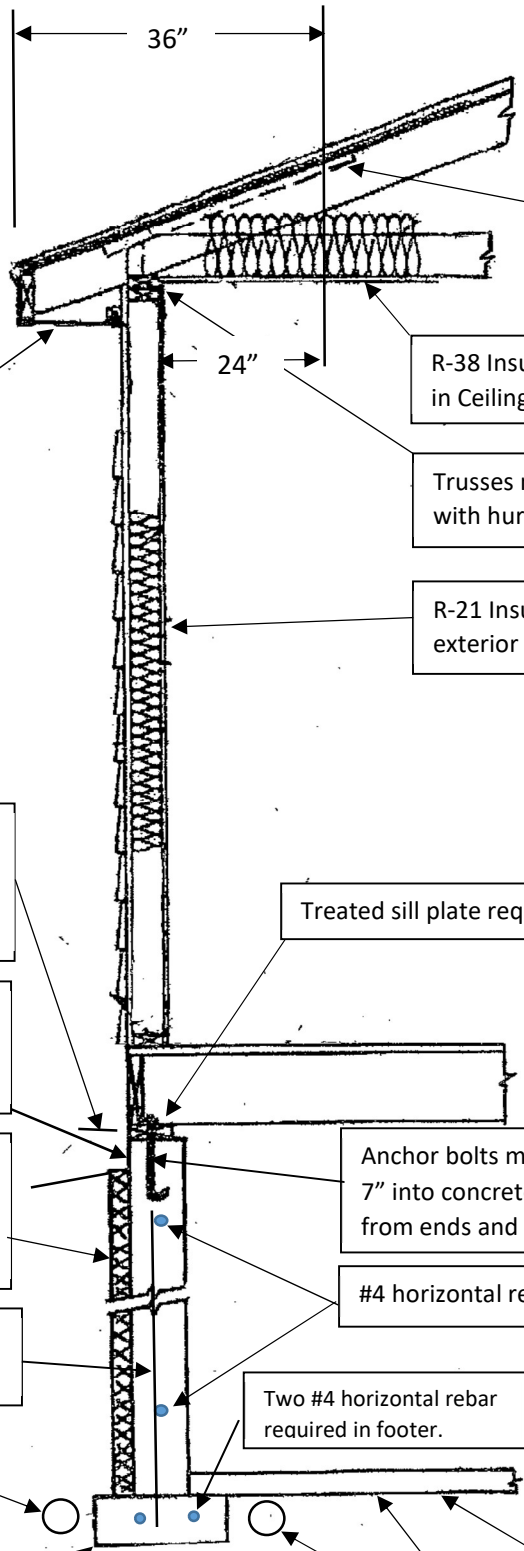
Wall and Roof Cross-Section on Basement Foundation



Shingle roofs require an approved Ice Barrier. Barrier on roof pitches less than 8/12 must extend from lowest edge of roof to a point not less than 24” inside wall line. Roof pitches 8/12 and greater must have minimum 36” ice barrier measured along slope of roof barrier from eve’s edge.

Baffling required to prevent insulation from blocking ventilation

R-38 Insulation Minimum in Ceiling

Soffit Area must be vented (1 sq. ft. per 150 sq. ft. of attic.

Trusses must be secured to top double plate with hurricane straps or truss screws

R-21 Insulation Minimum in exterior wall

Framing material must be grade #2 or better

Elevation of top of wall must be minimum 8” above exterior grade. Exterior grade must slope away from the wall.

Treated sill plate required on cement wall.

Basement walls retaining earth shall be damp proofed on exterior from top of footing to finished grade.

R10 insulation minimum required on basement walls. Finished basements may be studded and insulated with fiberglass batt.

Anchor bolts must be at least ½” diameter and extend 7” into concrete. Minimum 2 per plate, less than 12” from ends and corners, and spaced maximum of 6 feet

#4 horizontal rebar required based on backfill height

#4 vertical rebar required to tie wall into footer. Spacing based on backfill height.

Two #4 horizontal rebar required in footer.

Concrete slab shall be minimum 3 ½” thick. Reinforcement recommended. A 6-mil vapor barrier is required between slab and base course. Joints shall be overlapped not less than 6”. Vapor barrier not required in garage, utility and other unheated accessory structures.

4” Socked perforated perimeter drain tile with 2” of pea gravel below tile and at least 6” above tile.

Footer thickness minimum 6”. See Table R403.1 for thickness based on loads. 36” minimum frost line footer depth.

Width of footer:
1 Story = 12”
2 Story = 15”
3 Story = 18”

Below grade slabs require 4” of clean sand, pea gravel or crushed stone as base and must have positive gravity or mechanical drainage.

Updated 11/29/2023