

Residential Wall Section (Basement)

City of Willmar Building Department (2015 MSBC)

Manufactured trusses (provide a minimum 35 psf snow load). Provide copies of the roof truss drawings from the manufacturer.

Diagonal bracing is required on all gable end rafters.

Asphalt shingles, 15 pound felt, roof sheathing with spacer clips.
In a re-roofing application, the existing roof covering must be removed prior to the application of the new roofing material.

Ice and water barrier is required 24 inches beyond the exterior wall line starting at the eaves.

Provide attic ventilation at a rate of 1 ft² per 300 ft² equally split at the ridge and eave.

Metal drip edge and fascia board.

Continuous vented soffit material.

Windwash barrier must go to the underside of the truss top cord.

Headers must be sized to carry all loads. All rough openings 6 feet or larger require a minimum 3 inch end bearing.

Pan flashing is required on all windows and exterior doors.

Building paper is required on all walls and the gable ends.

7/16 inch wall sheathing minimum.

Siding: Vinyl siding allows for a maximum stud spacing of 16 inches on center including the gable ends (order the gable end rafters accordingly).

The rim joist must be insulated to a minimum R-20 (use foil faced foam or provide a sealed vapor barrier over the fiberglass insulation).

1/2 inch diameter anchor bolts with a 7 inch minimum concrete embedment. The anchor bolt shall have a 2 inch diameter by 0.125 inch thick washer tightened and countersunk 0.25 Inch into the sill plate. See MSBC Table R404.1 (2) for anchor bolt spacing. Not less than two bolts per sill member or exceeding 12 inches from corners. See separate table for reinforcing requirements.

Rigid protect the foam insulation from the top of the wall to a minimum of 6" below grade.

Masonry and poured concrete wall thickness and vertical reinforcing must comply with chapter 4 of the 2015 MSBC. Concrete and masonry foundations inclosing open, useable or habitable space must be waterproofed. The waterproofing must extend over the top of the wall to the inside face.

Install a perforated drain tile with a rock cover that extends at least 6" above the top of the footing and not less than 12" beyond the outside edge of the footing. All perforated drain tile must include a filter fabric membrane applied per the 2015 MSBC section R-405.

Footings must be sized to carry all applied loads. The footing mix must be a minimum #5000. Install two #4 rebar continuous with a minimum 20 inch lap and laps properly tied. The rebar must be bent through the corners. Support the rebar 3 inches above ground.

In new single family dwellings you are required to provide a radon mitigation system.

Minimum R-49 attic and R-20 wall insulation. Provide a sealed 4 mil vapor retarder or equal.

Energy type electrical boxes must be installed on all walls and ceilings that contain conditioned spaces.

Foundation walls that run parallel to floor framing, require solid blocking to be installed at 24" o/c spacing for the first three joist spaces.

Floor joists and blocking shall be connected to the sill plate at the top of the wall by the prescriptive method called out in Table 404.1(1) or shall be connected with an approved connector with a listed capacity meeting Table R404.1(1)

Provide a minimum R-15 foundation insulation from the top of the wall to the top of the footing/floor. A minimum R-10 must be installed on the exterior side of the foundation wall. Foam plastic insulation on the interior requires an approved thermal barrier and must be directly applied.

The concrete floor must be a minimum of 3 1/2" in thickness. Install a 6 mil vapor retarder over a 4" layer of rock. The vapor retarder seams must lap a minimum of 6" and extend 9" up onto the stem wall and be sealed to it.

All block cores must be drained to an interior drainage system.

