

MUNICIPAL INSPECTIONS, INC.
601 Main Street, Box 99
Elko New Market, MN. 55054
Email: Inspectenm@outlook.com
PHONE: 952-461-4777, FAX: 952-461-2782

RESIDENTIAL CONSTRUCTION CHECKLIST

The following checklist has been designed to aid contractors in obtaining inspection approval. The items represent various common code requirements and City policies/procedures:

FOOTINGS INSPECTIONS: (See Cold Weather Handout)

- Job site address must be posted.
- Permit card must be posted on site or available to the inspector.
- Approved plans and survey must be on-site.
- Engineer's soil report must be available (when requested by the inspector)
- Excavation and form work must be completed.
- Loose soil and debris must be removed from footing form work.
- Location and placement of form work must be in accordance with approved plans and survey.
- Survey stakes, hubs, and property irons must be in place and visible.
- Frost blankets are required to be on-site during cold weather conditions
- Footing under steps required.

FOUNDATION INSPECTIONS: (See Cold Weather Handout, when applicable)

- Poured foundation must be inspected after reinforcing has been placed but prior to pouring. **Do not spray form oil on reinforcement bars.**
- All foundations must be inspected prior to backfill.
- All foundations to be damp proofed and insulated prior to inspection.
- Minimum width of a hollow masonry unit on bearing walls shall be 6".
- Remove all excess fill from the site.
- All foundation systems require drain tile on exterior. Sand or rock is required under the basement floor.

FOUNDATION WALLS:

Concrete foundation walls shall be constructed with Grade 60 reinforcement as set forth in

Table R404.1.1 (2) 8" nominal wall thickness

Table R404.1.1 (3) 12" nominal wall thickness

Table R404.1.1 (4) 10" nominal wall thickness

Table R404.1.1 (1) Deleted by State

If foundation walls are parallel to floor framing, solid blocking or diagonal bracing must be installed at the anchor bolt locations in the first two joist or truss spaces. The Minnesota amendment MR 1303.1900 titled Conventional Foundation Construction may be used for design and construction of foundations with 12" thick hollow masonry or 8" thick cast in place concrete. The City must approve other engineered designs.

FRAMING INSPECTIONS:

- Rock construction entry and erosion control requirements shall be in place in accordance with the approved erosion control plan.
- Clips or spacing is required on orientated strand board roof sheathing.
- Permit cards must be posted on-site.
- Rough-in electrical, plumbing, and mechanical work must be completed, inspected, and approved.
- Approved plan must be available on-site.
- All windows and doors to be in place.
- Exterior fiberboard sheathing must be properly nailed (three [3"] inches O.C. at exterior edges and six [6"] inches O.C. at intermediate supports).
- Engineered truss drawings and layout must be on-site.
- Wood members used in the structural support of balconies and porches must be approved wood of natural resistance to decay; or, treated wood. These members include posts or columns, beams, joists, and decking.
- Holes bored in studs may not exceed 40% of the stud width.
- Notches in the top or bottom of joists may not exceed 1/6 the depth of the joist.
- Notches in joists may not be located in the middle third of the span.
- Holes may not be located within two (2) inches of the top or bottom of the joist, and may not exceed 1/3 the depth of the joist.
- Ends of joists must have 1 1/2 inch of bearing on wood and three (3) inches on masonry.
- Trimmer and header joists must be doubled with the span of the header exceeds four (4) feet.
- Ends of header joists more than six (6) feet long, and tail joists over twelve (12) feet long must be supported by joist hangers.
- Bearing partitions perpendicular to joists may not offset from supporting girders, wall, or partitions more than the joist depth.
- All beam splices shall occur over support with full width bearing.
- Provide solid blocking at bearing points to the foundation.
- Top plates notched or cut, must be sheathed or fastened with a metal tie across each side of the opening.
- Center bearing stud partition must be provided with two (2) inch blocking when not covered.
- Plywood subfloor must be properly nailed (six [6"] inches O.C. at edges, and ten [10"] inches O.C. at intermediate supports).
- Floor framing shall be nailed to the sill plate in accordance with Table No. 23 Q In addition, approved metal angle clips shall be used to fasten floor joists or blocking to the sill plate at intervals not exceeding six (6) feet. These clips shall be not less than eighteen (19) gauge and be fastened to both the joist and plate with at least 3-8d common nails in each leg.
- Where foundation walls are parallel to floor framing, solid blocking shall be installed at a spacing not greater than six (6) feet on center in the first three (3) joist or truss spaces.
- Cantilevers must be wrapped with foam insulation and house wrap.
- Wind wash located along exterior wall between trusses.
- Stairways must be constructed, having not more than an 7³/₄ inch maximum rise and a 10 inch minimum run.
- Stairways must have headroom clearance of not less than six (6) feet eight (8) inches.
- Firestopping must be installed at all interconnections between concealed vertical and horizontal spaces; such as soffits and drop ceilings.
- Engineered, pre-manufactured roof trusses shall not be cut or notched.
- Where required, proper framing hangers must be installed at joists, beams, trusses, and girder trusses.
- Guardrail and stairway spindles shall be spaced less than four (4) inches in between.
- Attic access opening must be provided not less than 22" x 30" with minimum clear height of

- not less than thirty (30) inches.
- Provide attic ventilation equal to 1/150th attic area. If 50% or more is provided in upper portion of roof and remainder is provided in soffit vents, it may be reduced to 1/300th attic area.
 - One layer No. 40 coated roofing or coated glass base sheet shall be applied from the eaves to a line twenty-four (24) inches inside the exterior wall line with all laps cemented together.
 - Protection against wind wash must be in place at the edge of attic insulation and cantilevered floors or bay windows.
 - Escape or rescue windows from sleeping rooms must have a minimum net clear opening of not less than 5.7 square feet, a minimum net clear opening height dimension of not less than twenty-four (24) inches; a minimum net clear opening width dimension of not less than twenty (20) inches and a finished sill height not more than forty-four (44) inches above the floor.
 - Windows having a glazed area in excess of nine (9) square feet where the lowest edge is less than eighteen (18) inches above a walking surface, must be of "Approved" safety glazing.
 - Windows located around a tub must be "Approved" safety glazing.

MASONRY WALLS:

Where walls of masonry of hollow units are decreased in thickness, a course of solid masonry shall be constructed between the wall below and thinner wall above. (IRC606.2.3) Minimum thickness of masonry bearing walls more than one story high shall be 8 inches. Minimum thickness of masonry walls of 1-story dwelling and garages shall be 6 inches. The use of 4" block is not allowed. (IRC606.2.1)

FOUNDATION ANCHORAGE:

Sill plate anchored to foundation with ½" minimum anchor bolts and embedded into masonry or concrete a minimum 7" spaced a maximum of 6 feet on center and shall also be located within 12 inches from ends of sill plate. Interior bearing wall sill plates shall be positively anchored with approved fasteners. Foundation anchor bolts shall align with required reinforcing. All anchor bolts installed in masonry shall be grouted in place with at least 1" of grout between the bolt and the masonry. (MR1309.0403, IRC403.1.6)

FOUNDATION WATERPROOFING:

Exterior foundation walls that retain earth and enclose habitable or useable spaces located below grade shall be waterproofed with:

1. 2-ply hot mapped felts
2. 55# roll roofing
3. 6-mil polyvinyl chloride
4. 6-mil polyethylene
5. 40-mil polymer-modified asphalt

Joints in the membrane shall be lapped and sealed with an adhesive compatible with the waterproofing membrane. (IRC406.2)

VAPOR RETARDER:

An approved vapor retarder with joints lapped 6 inches shall be placed between concrete floor slab and subgrade. Not required in unheated areas such as garages and sheds. (IRC506.2.3)

INSULATION INSPECTION:

- Approved roof covering materials must be installed.
- Framing work must be completed, inspected, and approved.
- All fire stops are to be sealed on interior and exterior walls.
- Vapor barriers must be minimum four (4) mill thick and continuous with joints overlapped.
- Insulation must be installed around all exterior window and door frames.
- Floor insulation must be installed on all exterior projections, such as cantilevers.
- Full width insulation chutes must be installed in each rafter space.

FIREPLACE INSPECTIONS:

- Rough in and final are the minimum required inspection. Other inspections may be required.
- Separate permit required for gas fireplaces.
- A twenty-five (25) pounds per square inch (PSI) air test for ½ hours required on rough in gas piping.
- Manufacturer's installation manual must be attached to each factory built fireplace.

REQUIREMENTS FOR WALLBOARD. NO INSPECTIONS REQUIRED:

- Water resistant rock shall not applied over a vapor barrier.
- 5/8" Type X rock required on ceiling, with framing twenty-four (24) inch O.C. and shall run perpendicular to framing members.
- Screws required one (1) on each seam and three (3) in the field twelve (12) inch maximum O.C.
- Screws shall be long enough to penetrate 5/8" into the wood framing.
- If ring shank nails are used, maximum spacing seven (7) inch on center.
- Fasteners shall not be placed less than 3/8" from the edge.
- Fasteners shall not be applied in such a manner as not to fracture the face paper.

FINAL INSPECTIONS:

- Permit cards must be posted on job site.
- Plumbing, mechanical, and electrical work must be completed, inspected, and approved.
- Final grade prior to sodding must be approved by the field inspector.
- Minimum four (4) inch high house numbers must be installed.
- Exposed polyethylene vapor barriers must be of an "Approved" fire resistance material, or protected by not less than 1/2 inch thick gypsum wallboard.
- Provide 6" wood earth separation.
- Enclosed space under stairs must be protected on the enclosed side with 1/2 inch thick gypsum wallboard under stairs and supporting walls.
- Landings must have a dimension measured in the direction of travel equal to the width of the stairway.
- The top of handrails must not be less than 34 inches nor more than 38 inches above the nosing of the treads.
- Handrails must be continuous the full length of the stairs, having ends which are returned to the wall.
- Stairways having four (4) or more risers must be installed with hand rails.
- Landings more than thirty (30) inches above grade or floor below, must be protected with a guardrail not less than thirty-six (36) inches in height.

- Smoke detectors shall be hard wired to commercial power supply with battery backup. Smoke detectors shall be located in each sleeping room and in corridors leading to sleeping rooms. When ceiling height of an adjacent room to a hallway serving the bedroom exceeds twenty-four (24) inches, a smoke detector shall be placed in the hallway and the adjacent room. Smoke detectors shall be located on every floor and in the basement. In levels separated by walls or doors restricting the flow of smoke from the lower level to the upper level will be considered separate floors.
- Open guardrail and stair railings must have intermediate rails such that a four (4) inch diameter sphere cannot pass through.
- The separation wall between the house and garage must be installed with materials approved for one-hour fire resistive construction (1/2" gypsum wallboard, and a self-closing, tight fitting solid wood core or steel insulated door. If the garage ceiling is sheet rocked with 1/2" the walls supporting the roof trusses must be sheet rocked with 5/8" Type "X", the walls supporting the roof trusses must be sheet rocked with 1/2" drywall. In all cases the fire wall must be fire taped.
- Exterior door, window and other openings exposed to the weather must be flashed in such a manner as to make them waterproof.
- Foundation insulation exposed to the weather must be protected from sunlight and physical damages. Minimum of R10 for the full height of the foundation.
- Attic insulation certification report must be posted with permit cards, or the attic access panel must be removed for inspection.
- In recently platted subdivisions, sod is required in the front and side yards and tree planting is required per the subdivision development plan.
- Curb box must be raised to finish grade.
- Hard surface driveway shall be installed.
- Gas fireplaces to be operable and performance tag placed by the installer.
- Appliances installed.
- All floor coverings completed.
- Natural gas connected when available in street.
- Accesses for bathtub "P" traps and whirlpool electrical pumps installed.
- Sod or erosion control in place.
- Patio doors blocked or guardrail installed.
- Construction debris removed for site.
- Exterior concrete and steps.
- A clean furnace filter installed.
- Secure sump cover; sump pump shall be hard piped to the exterior.

NOTE:

This construction check list should only be used as a guide, as each construction site is unique and is site specific. In the event you have questions that are not covered in this handout, please call Municipal Inspections, Inc. at 952-461-4777.