

SPECIAL POINTS OF IN- TEREST:

- Crawlspace
- Piping System Pressure Tests
- Townhouses vs Condominiums
- Inspections
- Final Occupancy

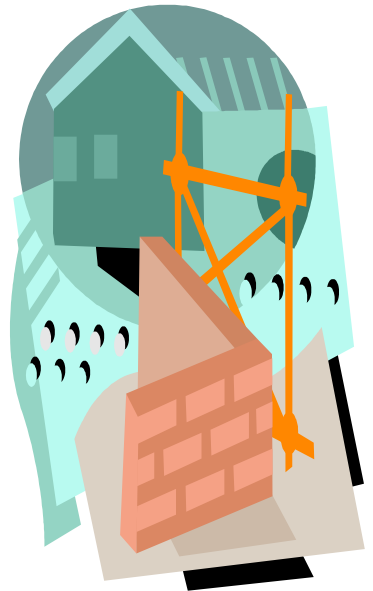
Soils Reports & Grading Requirements

All plans submitted to the building division for review require copies of the recommendations for soils for the entire subdivision. When the project is approved and excavation work has been completed, a certification letter from a licensed engineering firm is to be submitted to the Building Division. The letter is to detail that the site grading and excavation work was completed in accordance with the requirements of the initial soils report. The footings and foundation walls are not to be poured until the

letter has been submitted to the Building Division for review and approval.

The letter from the engineer is to address another code requirement related to the soils report. The letter is to specify whether the foundation is to be damp-proofed or water-proofed depending on the water table level at the specific site. Either damp-proofing or water-proofing is required. The code provides a list of what methods are approved for damp-proofing and water-proofing in the 2006 Inter-

national Residential Code Section R406.



Domestic Water Systems

If a multiple residence structure of four or more units is being built and a plumber requires assistance in designing a domestic water system, the City has a worksheet to aid in the design. There is also a website (www.imnoeng.com) that is also available as a tool.

The standard set by the Building Division is: the velocity is not to exceed 10 feet per second and the water pressure and gallons per minute to the most remote plumbing fixture must be adequate to run that fixture.



Crawlspaces

1. **Exposed earth** in un-vented crawlspaces is to be sealed with a continuous vapor retarder and the joints of the vapor retarder shall overlap by six (6) inches and shall be sealed or taped. The edges of the vapor retarder shall extend at least six (6) inches up the stem wall and shall be attached and sealed to the stem wall. This is an important component of mold and mildew mitigation in sealed crawlspaces.
2. **Condensate pumps** for high efficiency furnaces in crawlspaces require an emergency signal light in the living space to indicate when the unit is malfunctioning.
International Mechanical Code, Section 307.2.1—If there is a malfunction, the furnace is to be automatically shut down. This shutdown device is generally wired into the thermostat. Condensate pumps in crawl spaces must be secured to prevent overturning.
3. **Framing attachment** of walls where the joists are hung down into the crawl space: Notching out the treated sole plate for the nut and washer is only allowable if the sole plate is three (3) inches thick. If three (3) inch sole plate is used, a longer anchor bolt will be necessary to maintain the required seven (7) inch embedment into the foundation. Another option is to notch out the floor sheathing so the washer and nut extend through the floor sheathing.
4. **The 2006 Uniform Plumbing Code** Section 608.5 now indicates that the temperature and pressure relief valve for a water heater is not to terminate in a crawl space. Water heaters and water makers are no longer to be located in a crawlspace. Water heaters located on wood floors are to be in a drain pan that must drain to an approved location. If the drain for the pan is sized to at least one (1) inch the T&P may drain into the pan. The T&P could also be routed onto the garage floor for discharge.
5. **The International Energy Conservation Code** indicates that a sealed crawlspace can have a continuously running exhaust fan that is sized at one (1) cfm per 50 square feet of crawlspace area. As an alternative we will also accept an exhaust fan that is actuated by a humidistat rather than being continuously running.
6. **Section R406** of the 2006 International Residential Code details the need for either damp-proofing or water-proofing of the exterior of crawlspace water-proofing or damp-proofing process since there is no "living space" in a crawlspace.

Minimum Requirements for Final Occupancy

(Single Family Dwellings)

The Building Division is often asked, "how soon can I move in?" Each dwelling is unique, but the following requirements are provided to give guidance on this question.

A final inspection must be requested by the contractor or owner of the property and the following items must be completed.

All construction inspections must have been completed and approved through the sheetrock inspection.

The structure must comply with the minimum energy efficiency regulations.

All exterior doorways and exits must be complete, including landings, stairs and re-

quired handrails. Note: One exit is required, but any additional exits must also comply with code requirements.

If the decks where access to the deck is an exterior door from the structure are not complete, you must provide an approved landing at the door and then take your approved set of plans to the building department and obtain a plan change deleting the deck from both the approved set and the office set of plans. You will be required to obtain a separate building permit for the decks when you complete them.

Provide a kitchen sink, cleanable working surface, and cooking facilities.

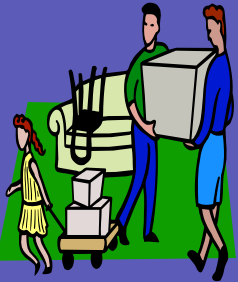
All bathrooms must be complete, including water closet, lavatory, and shower or bathtub. The bath-

room must be separated from food preparation areas by a tight fitting door.

All other plumbing fixtures must be installed or the drains permanently capped by an approved method. (no test caps) A new permit will be required to install them later.

Bathrooms and Kitchens must have a cleanable finished floor material.

All electrical wiring must be complete and protected. All switches and outlets, including required ground fault or arc fault protected receptacles, must be installed with covers in place. All required electrical fixtures must be installed. All other fixtures must be installed or all wire ends insulated with approved caps and their boxes covered.



Do not move people into a residential or commercial building without first obtaining a Certificate of Occupancy from the Building Division



Townhouses vs Condominiums

Duplexes, Townhomes, and Condominiums- What's the Difference?

Duplex, Triplex etc: Two or more residential units on a parcel under single ownership which share common walls or floor/ceiling.

Town House: A dwelling unit, located on its own lot, that shares one or more common or abutting walls with one or more dwelling units, each located on its own lot. A townhouse does not share common floors/ceilings with other dwelling units.

Condo: More than 2 units (not just residential) on defined lots under shared ownership. What separates residential condos from a townhouse is the condo complex may have units that do not have a ground floor. Often they will be multi-story complexes with many units being entirely located on the 2nd, 3rd, 4th, floors.

The townhouse and condominium concept also extends to the building permitting of these units. A three dwelling townhouse project requires

three separate building permits. A triplex condo project requires only one building permit for all three units. Thus, when plans are submitted for townhouse units, plans are submitted for each individual unit and when plans are submitted for a condo project, plans are submitted for the entire building.



The permit fee includes one inspection and one corrections inspection. Be prepared to pay a penalty for not making corrections prior to calling for a third or fourth inspection for the same inspection item i.e., gas service, temp power, rough-in, etc.

Piping System Pressures

Piping system pressures are as follows:

Gas Pipe—10 psi—15 minutes (NW Energy Requirement)

TRAC Pipe (CSST) - 1.5 x working pressure or 10 psi—30 minutes

DWV Systems—5 psi air

test / 10 ft head water—15 minutes

Interior Rain Leaders—10 ft. head—15 minutes

Water Supply System—working pressure or 80 psi—15 minutes

In-slab-radiant heat—1.5 working pressure or 100

psi—15 minutes (test in-slab heat during concrete pour)

Ground Source Heat Loop—1.5 x maximum working pressure—30 minutes (after being backfilled.



WEEKEND OR HOLIDAY FOUNDATION INSPECTION POLICY

The Building Division's past policy has been to allow a contractor to hire an engineer to conduct a foundation inspection on a weekend or holiday when a building inspector is not available.

We will continue to allow this in the future and accept a letter of approval with these conditions;

- The letter must come from a State of Montana Licensed Engineer or Architect. It must state that the Engineer or Architect was personally onsite and conducted the inspection, and that the excavation, required hardware, reinforcing steel, and the UFER ground were all per the International Building Code and the Approved Plans. The letter must be wet signed and stamped.

Note: If the UFER ground has not been specifi-

cally approved in the letter and was not visually inspected by the Building Division, a new UFER ground must be installed.

- The contractor must call for and schedule the required City foundation inspection for the next available building inspector work day. During that inspection, the building inspector will make a general inspection of the site and visible part of the foundation. At this time the contractor will provide the wet signed letter from the Engineer or Architect and give it to the building inspector for approval by the Building Official. If everything looks good, and the letter has the required information, the building inspector may sign off and approve the foundation. If there are issues the building inspector

will complete a correction notice describing those issues.

Note: There will be no further inspections on that structure until the appropriate letter has been received and the foundation and UFER ground have been approved.

The contractor may also request an off hour inspection to be conducted by a building inspector with these following requirements;

There must be an inspector available during that off time to make the inspection.

A minimum 3 hour inspection must be paid at the Building Division prior to the inspection being made.

Effective February 13, 2009



City of Bozeman Building Division

City of Bozeman
Building Division
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General Announcements:

Fire Chief Jason Shrauger has assumed the duties of Public Safety Department Head which includes both the fire department and the building and safety divisions.

Bob Risk is the Building Division's new Chief Building Official.

Effective March 1, 2009 the Building Division Inspectors will no longer be conducting any inspections on any commercial or residential project that are not specifically requested by the contractor or the owner/builder. There will be no more drive by or random progress inspections. So if you are ready for an inspection, don't forget to call the day before you want the inspection and request it.

Effective March 16, 2009, the Building Division will be closed during the hours of 12:00—1:00 p.m. daily.

Inspection Reminders

- No inspections will be conducted unless the original stamped approved plans for the project and the inspection record card are on site and available to the inspector.
- 24 hour notice is required for all inspections. If you do not pass your inspection that day, you must call in to the building division inspection line to reschedule your inspection for the next regular work day. Depending on the inspector's workload for that day, he may be able to do a re-inspection that same day, but there are no guarantees... you may not get your re-inspection until the next day. This policy will apply to all required inspections, including footings, foundation wall, and bond beam inspections. For this reason the building division recommends that you do not schedule your concrete pour for the same day as your inspection.
- A site inspection approval is required prior to approval of a foundation inspection. This inspection may be requested and conducted at the same time as the foundation inspection. The main reason for the site inspection will be to verify the correct building setback to the property lines. The contractor/property owner must establish the correct property line locations and have them marked for the inspector for this inspection.
- Nailing inspections are required for all shear walls and braced wall panels prior to covering them. All hold downs and any other required hardware must be installed per the approved plans and per the hardware manufacturer's specifications for these inspections.
- A Sheetrock Nailing Inspection is required for all sheetrock applications and must be completed and approved prior to the start of taping or spotting nails. You may be required to re-nail/screw your sheetrock panels if they are taped prior to the nailing inspection.
- Revisions to the plans generally cannot be approved in the field. ***To save time and to avoid potentially costly delays to your project, please bring your approved plans to the building division and review your proposed revisions with a Plans Examiner or the Building Official prior to beginning construction on those revisions.*** The revisions will be noted as approved on your approved set and our office sets of plans. We will make every effort to approve your revisions "over the counter" while you are here, but extensive/major revisions may require review by a licensed design professional. Also, revisions to plans drawn by an Architect or Engineer will require approval from that licensed design professional. Please note that the revision must be approved by the building division prior to calling for an inspection for that work.
- On projects that have been through the 'final site plan process', before your final inspection can be approved and before a Certificate of Occupancy can be issued, you must have clearances/approval from the Planning, Engineering, and the Fire Departments. All conditions of approval for your project must be completed and approved by the department that required them. ***No Certificate of Occupancy will be issued prior to obtaining approvals from these departments.***
- The Final Inspection by the Building Division must be completed and approved and a Certificate of Occupancy Issued prior to occupying any residential or commercial structure. A minimum "Move In" penalty of \$146.00 will be assessed if a structure is occupied prior to the final approval. Additional fees and penalties may also be assessed for occupying a structure without approval as allowed by the International Building Code and the Administrative Rules of Montana.

STANDARD INSPECTION ITEMS

Site Inspection

Property Lines/Setbacks
Rough Sewer
Rough Water
Electrical Conduit
Meter Box
Temporary Power

Foundation

Footings
Ufer Ground/Ground rod
Underslab Plumbing (test)
Underslab Water (test)
Holdowns/Anchors
Vapor Barrier
Structural Slab
Bond Beam

UnderFloor (Raised Floor Const)

Underfloor Plumbing (test)
Underfloor Gas (test)
Underfloor Water (test)
Underfloor Ducts
Underfloor Frame
Underfloor Insulation

Frame and Rough

Roof Nail/Truss Calcs (w/beams, hardware)
Holdowns
Exterior Shear/Braced Walls
Interior Shear/Braced Walls
Elect Service Panel
Sub Panels
Bonding
Rough Electric
Rough Plumbing (test)
Rough Gas (test)
Rough Water (test)
Ducts and Vents
Flues and Chimneys
Frame and Plans

Exterior Siding
Water Resistive Barrier

Insulation

Wall
Ceiling
Windows
Blown-in Certificate

Sheetrock

Nailing/screws
Braced Walls
Interior Firewalls
Exterior Firewalls

T-Bar

Strut
Wall Support
Light Support
Fire Separation

Final Inspections

Sidewalks
Finish Grading
Finish Roof
Finish Plumbing
Finish Electrical
Smoke Detector Test
Fireplace
Furnace
AC Condenser
Ductwork
Commercial Kitchen Hood
Kitchen Make Up Air
Water Heater
T-Bar Ceiling Final
Planning Clearance
Engineering Clearance
Fire Clearance
Building Accessibility
Site Accessibility
Final/C of O

Note: Permit fees include a maximum of two inspections for each individual inspection item. Additional inspections for each item may be requested at our hourly rate of \$75.00 per hour.

MISCELLANEOUS INSPECTIONS

Photo Voltaic/Solar

Site Inspection (remote arrays)

Setback/Property Lines
Foundation

Frame and Plans

Plans and Specs
Array Attachment
Rough Electric
Plumbing w/ Test
Grounding
Bonding
Battery Enclosures

Final

Placarding
Finish Electrical
Finish Plumbing
Solar Final

Electrical Service

Service _____ Amp
Sub Panel
Grounding
Bonding
Electrical Final

Misc. Mechanical/HVAC

Gas (Test)
Plumbing (Test)
Electrical
Bonding
Furnace
AC Condenser
Duct Work
Water Heater/Boiler
Radiant Heat/Snow Melt
Combustion Air/Makeup Air
Commercial Kitchen Hood
Exhaust
Mechanical Final

Misc. Electrical

Service _____ Amp
Sub Panel
Rough Electrical
Grounding
Bonding
Electrical Final

T-Bar

Strut
Wall Support
Light Support
Fire Separation
T-bar Final

Re-Roof

Pre-Roof
Sheathing/Roof Nail
Roofing Dry In
Roof Final

Masonry Wall

Foundation
Bond Beam 1
Bond Beam 2
Bond Beam 3
Bond Beam 4
Wall Final

Swimming Pool Inspections

Pre-Gunite

Setback/Property lines
Soil/Compaction
Steel
Bonding
Electrical Conduit
Plumbing & Test
Gas & Test
Solar Piping

Pre-Deck

Electrical Conduit Extension
Slab Grade & Reinforcement
Bonding of Diving Board, Handrails, etc.
Expansion Joint Material at Coping

Pre-Plaster

Barrier/Enclosures Installed
Door Alarms

Final

GFI Test, Lights & Equipment Wiring
Barriers and Alarms
Pool /Spa Covers
Pool Final

Note: Permit fees include a maximum of two inspections for each individual inspection item. Additional inspections for each item may be requested at our hourly rate of \$75.00 per hour.