

Building Bulletin

penticton.ca

February 16, 2021

Bulletin No. 21-01

Revised:

Inspection Guide

Single Family Dwelling (SFD) and Duplex – New Construction, Additions & Renovations

Purpose

Building bulletins are part of the City of Penticton's customer service program. They are designed to provide an improved understanding of the Building Code and Building Science and to reduce the costs associated with correcting infractions.

The goal of the Building and Plumbing Inspections are to ensure that buildings and their systems generally conform to relevant Bylaws, the BC Building & Plumbing Codes and other applicable standards.

In order to reduce delays and improve communication, the following inspection guide describes the elements of construction that may be assessed at each required inspection of SFD/Duplex construction projects. **Please** refer to the condition letter included in your approved permit package for the required inspections on your project.

References

City of Penticton Building Bylaw

<u>City of Penticton Building Department</u> Bulletins

<u>City of Penticton Bylaw Notice Enforcement</u> Bylaw No.2012-5037

BC Building and Plumbing Codes

<u>Technical Safety BC – all gas and electrical</u> work

Onsite Sewage Systems / OWRP

Implementation

Booking Inspections

Inspections are performed during business hours, Monday to Friday. Inspections can be

booked through the 24 hour inspection line (250) 490-2511 up to 8:30 am for same day inspections or via MyCity at <u>online.penticton.ca</u>. If you have not heard from our office by 12:00 PM, please call 250-490-2571.

Building Officials will contact the requestor by 12:00 (noon) to:

- Confirm a time,
- Confirm if the required work is ready, and,
- Ensure any required documentation (field reviews, surveys, etc.) has been submitted.

Having a contact person on site is beneficial but is not mandatory unless required by the Building Official. It is imperative that the approved permit plans and the permit placard (posted) are on site for the building and plumbing officials review. The inspection report will be e-mailed to the owner and agent provided on the



submitted permit application. Please refer to https://www.penticton.ca/permits/inspections for further information.

Inspection Status

Building Officials will audit at each inspection type noted on the permit condition letter (see list). Building Officials will qualify the site audit to allow for continuation of the project, partial approval or rejecting and possibly requesting all work to cease if substantial issues arise.

What inspections do I need?

Each project is different, please see your permit condition letter for required inspections.



- 2 Create your MyCity account
- 3 Confirm your account registration with an email
- 4 Link your account to your building permits & planning applications

Any reports, field reviews, surveys, etc. are required to be submitted prior to inspection. Send it to permits@penticton.ca

Inspection Definitions:

The following are the inspection definitions:

• Deficiencies:

Deficiencies are details which need to be corrected or otherwise addressed prior to your next inspection

Pass:

Substantial Compliance. Work can proceed until the next required inspection listed on your permit condition letter.

Partial:

Substantial compliance with minor deficiencies. Work can proceed but deficient items need to be corrected and a re-inspection of the deficiencies noted is required. You are authorized to continue work in areas that do not require the correction and re-inspection of those deficiencies.

Fail:

Significant deficiencies or missing required documentation is identified that must be

completed prior to work continuing. A re-Inspection must be called again once the noted deficiencies are corrected.

Cancelled:

Either the Permit Holder or Building Official has determined that the inspection cannot be performed as scheduled. It is the responsibility for the owner/agent to reschedule the required inspection.

Stop Work:

Substantial issue or re-occurring deficiencies recorded such as substantial changes to approved drawings or creating a hazardous condition to neighbouring properties. No further work allowed until deficiencies reviewed and corrected. Potential fines can result for failure to stop work.

Comments from Building Official:

 "Not a deficiency" is a notation made onsite regarding inspection comments

Scheduled Inspections:

Be ready for your inspection. Unforeseen delays may occur and prevent you from being prepared for your scheduled inspection. Inspections are usually conducted between 9:30 am to 3:30 pm – Monday to Friday. Building Officials can arrive anytime. You will be contacted by your Building Official in the morning of your inspection to confirm if you are prepared. If you are not prepared at this time, the inspection will be cancelled with no negative consequences.

If you are not ready when a Building Official is in your area, your inspection request may be cancelled and reinspection fee may be charged. Re-inspection fees may be applied for repeatedly failing to address previously noted deficiencies or calling a Building Official to a site when not ready for the inspection.

It is the permit holder's responsibility to re-book the inspection using the 24-hour line (250-490-2511) or MyCity at <u>online.penticton.ca</u>. **Building Officials will not re-book inspections.**

Re-Inspections and Changes to Drawings:

Each project is allotted re-inspections, however, if more than one re-inspection is required for a particular stage of work than a re-inspection fee plus GST will be required to be paid prior to the next inspection. Please refer to https://www.penticton.ca/permits/inspections for further information.

Any changes to the approved plans are to be reviewed with the Building Department for approval prior to any further inspections being scheduled. Continuing construction with a significant variance to the approved drawings may



result in significant fines. Significant changes from the approved drawings, particularly as part of a Development Permit, may also result in a "Stop Work" condition being placed on the project. Significant changes are charged a Plan Check fee plus GST and is based on the time involved for staff to review the amendments.

See Building Permit Fee Schedule to confirm current amounts of charges, fees and penalties at https://www.penticton.ca/business-building/building-permits/building-permit-applications-forms

Disclaimer

Inspections are not a guarantee of workmanship or full compliance of code requirements. The inspection is a visual audit of that stage of construction at that period of time during the site visit. Compliance to the BC Building Code and other regulations are the responsibility of the owner/agent and the contractor during the course of construction.

Building Bulletins are prepared to provide convenient information for customers, and should not be considered a replacement for reviewing the bylaw, permit condition letter or associated legal documents. If there is any contradiction between this guide and relevant municipal bylaws and/or applicable codes, please refer to the bylaws and/or codes for legal authority.

Registered Professional (RP) Involvement:

Where a Registered Professional is involved (Engineer, Architect), field inspection reports are to be provided prior to, or at the time of, the scheduled inspection. Unless otherwise arranged with the Building Official, an approval cannot be provided without the RP documentation that the work is substantially approved for the next phase of construction. Building Officials may require the involvement of a Professional Engineer or Architect, if conditions are observed or variations to the as-built work arise, prior to work continuing.

Inspection Schedule

- On-Site Orientation (Optional)
- <u>Footing/Excavation</u>
- Foundation
- <u>Dampproofing/Draintile/</u> Roof Drains
- Water and Sewer Services

- Plumbing Underslab!
- Foundation/Slab Insulation
- Radon/Soil Gas Control
- Plumbing Rough In
- Framing
- Fire Separations/Fire Blocking
- Insulation and Vapour/Air
 Barrier!
- Plumbing Final
- Occupancy and Completion of Project
- Occupancy (Partial)
- Completion of Project

! Critical project benchmark inspections. Failure to pass inspection or proceed without inspections could result in stop work orders and significant fines

On-Site Orientation (Optional) This inspection may be performed as part of the plan checking process or be a scheduled inspection prior to the start of construction.

Starting your project off right is critical to ensuing a successful project, which will reduce stress and avoid costly delays. It's highly recommended for light commercial or multi-unit residential construction involving a development permit or variance.

Infill Development -Starting your Project off right!

For construction within established neighbourhoods, please see our <u>Infill</u> Construction Guide at penticton.ca/permits/bulletins

The following will be reviewed on site:

- Lay of the land in relation to proposed drawings to review for existing structures and geographic features that may impact the construction or neighbouring properties (The Building Official may request the involvement of a registered professional if existing site conditions warrant additional third party reviews.);
- Site drainage and retaining in relation to the drawings and neighbouring properties;
- Site safety plan to be in place;
- Current <u>BCBC Part 8 Safety</u> Measurements in place.
- Permit card posted and approved permit package to be on-site.

Note: No new construction (framing or placing of footing forms) or removal of soil shall take place until a permit is issued. Site prep work may be allowed but you must confirm with your Building Official prior to commencing any on-site work

Construction projects in established neighbourhoods, known as infill construction, pose challenges that construction in other areas wouldn't, because of their proximity to neighbouring homes. But potential issues such as public and worker safety and damage to neighbouring or city property and established trees can be easily guarded against.

Property owners and builders must keep public safety top of mind during all stages of demolition, excavation and construction. Check in early and often with the surrounding community — and particularly neighbouring property owners — to understand their needs, priorities and concerns. We've summarized some construction best practices below that will help avoid safety issues and conflicts.

Please Note!

- Site works encroach within no build covenant, statutory rights-of-ways (SROW) or riparian areas.
- Site Safety Part 8 BCBC Excavation creates safety concerns and or encroaches within neighbouring or city property with previous permission.
- Excavation leads to off-site drainage or debris on to municipal roads.
- Damage to City or neighbouring properties

Footing/Excavation

BCBC 9.12, 9.15, & Part 8

This inspection is called for once the placement of footings forms has been completed but prior to pouring concrete. Geotechnical & Structural Engineer field reviews may be required.

Overview: Confirm placement of footing forms prior to pouring foundations. If mono pouring the footings and foundation walls, including pools and retaining structures a form survey (including elevations) is required from a BCLS land Surveyor

Any reports, field reviews, surveys, etc. are required to be submitted prior to inspection. Send it to permits@penticton.ca

The following will be reviewed on site:

- 1. Permit card posted
- 2. Approved permit package to be on site
- 3. Site safety (Part 8 BCBC) impact to neighbouring properties/city
- 4. Working in a protected area Riparian/steep slope, etc.
- 5. On-site layout in variance with permit drawings
- 6. Geotechnical and/or structural engineer (if applicable) to provide applicable field review and testing reports before inspection
- 7. Exposed Soils condition requires Geotechnical review
- 8. Cold weather provisions (when applicable)
- 9. Stepped footings (lack of footing bearing support)
- 10. Pad footing sizes
- 11. Minimum frost protection or finished grade clearances (drop footings at below grade entrance)
- 12. Visual Siting
- 13. Frost protection at the exterior door at the bottom of the stair well.
- 14. Footing thickness shall not be less than the greater of 100m or the width of the projections of the footing beyond the supported element.

Information Bulletins:

Bulletin 12-01 Field Inspection Safety Requirements

Bulletin 12-03 Construction Noise

Bulletin 12-05 Retaining Wall Requirements

Bulletin 18-05 - Footing and Foundation Inspections

Bulletin 12-11 Cold Weather Requirements

Bulletins can be found at www.penticton.ca/permits/bulletins

Please Note!

- Footing thickness shall not be less than the greater of 100m or the width of the projections of the footing beyond the supported element. Precautions not taken to protect against cold weather conditions frost in ground. See Cold Weather Protection Bulletin
- Stepped footings greater than current BCBC
- Undermining existing structures
- Suspending footing (grade beam) off foundation walls.
- Professional Field Reviews and Reports not supplied

BCBC 9.15 - Placement of foundation forms prior to pouring concrete

Overview: Confirm Zoning requirements (heights, set backs, etc.), consistency with drawings and ensure that the structural loads of the building will be safely transferred to the surrounding soil. **A form survey including elevations or written confirmation** from a <u>BCLS land surveyor</u> is to be provided prior to pouring concrete for all above grade foundations including elevations, when required (refer to approved drawings and permit condition letter).

Any reports, field reviews, surveys, etc. are required to be submitted prior to inspection. Send it to permits@penticton.ca

The following will be reviewed on site: 1. Previous Inspection items and deficiencies completed 2. Permit card posted 3. Approved permit package to be on site 4. Site safety (Part 8 2012 BCBC) – impact to neighbouring properties/city 5. Working in a protected area – Riparian/steep slope, etc. 6. On-site layout in variance with permit drawings 7. Structural engineer (if applicable) to provide applicable field review and testing reports with no deficiencies noted. Required prior to inspection 8. Cold weather provisions (when applicable) 9. Height & thickness of wall as per approved plan 10. Lateral support - Keyway; 11. Anchorage 12. Laterally supported or unsupported wall 13. Horizontal and vertical reinforcement for ICF walls (Part 9 prescriptive); 14. Potential impact for finished grades or frost protection 15. Form survey (submission required prior to inspection) 16. Review front entrance foundation to be raised for preparation of pouring concrete stairs/pad up against concrete 17. Review stepped foundation lengths 18. Footing thickness shall not be less than the greater of 100m or the width of the

Projects under Development Permit (DP) or Development Variance Permit (DVP) will require verification from Planning staff, please allow for additional review time. Information Bulletins:

Bulletin 18-05 Footing and Foundation Inspections

Bulletin 18-04 Survey Requirements

Bulletin 12-11 Cold Weather Protection

Bulletins can be found at www.penticton.ca/permits/bulletins

projections of the footing beyond the supported element.

Please Note!

The following items are common deficiencies leading to failed inspections and potential STOP Work notice. Please ensure that you have reviewed the follow items and ensure you are prepared for your inspection.

- BCLS prepared survey has not been reviewed for conformance.
- Rebar layout for ICF not as prescriptive
- Openings in ICF too close to corners or over sided to BCBC
- Undersized columns/sono- tubes
 Inspection Guide for SED and Dupley Building New Const.

Critical Benchmark Inspection

Damproofing/Drain tile/Roof Drains

BCBC 9.13, 9.14 BCBC & Part 2

Occurs after footing and foundations and prior to backfilling of Perimeter Drainage Pipe

Overview:

To ensure there is adequate coverage from the ingress of water and drainage pipe is placed in the correct manner.

The following will be reviewed on site:

- 1. Deficiencies from previous inspection;
- 2. Foundation walls to be laterally braced (if required to be reviewed by engineer);
- 3. Interior garage wall that is shared with basement to be damp proofed
- 4. Walls to have holes and recesses from tie removal sealed with cement mortar or damproofing material;
- 5. Damproofing material standards; Check in all honeycombing, inside and outside corners for complete seal of damproofing
- 6. Moisture protection for interior finishes;
- 7. Top of foundation drain pipe to below bottom of interior basement footing/crawl space slab;
- 8. Window and door well drainage;
- 9. Type and size of drainage pipe to be identified (foundation and roof);
- 10. Foundation drainage pipe to be drained to a dry well not less than 5m from building foundation roof drains to be drained to a separate rock pit; or as designed by the Geotechnical Engineer
- 11. Requirements for next inspection.
- 12. Frost protection next to the exterior door at the bottom of the stair well.

Geotechnical Engineer to submit inspection field report to confirm if it is unnecessary to install foundation/roof drainage pipe to rockpit/drywell.

Any reports, field reviews, etc. are required to be submitted prior to inspection. Send it to permits@penticton.ca

Information Bulletins:

Bulletin 18-02 – Geotechnical Requirements

Bulletins can be found at www.penticton.ca/permits/bulletins

Please Note!

- Insufficient drain rock installed. Min 150mm around pipe (typical)
- Drainage for window wells not installed and roughed in.
- Not enough damp proofing applied to foundation Foundation backfilled prior to inspection

Water and Sewer Services

BCBC 9.31 BCBC, Part 2 BCPC

Water and Sewer service piping and cleanouts installed from the building to the City connections and under test. The replacement, repair or upgrade of existing water or sewer services.

Overview:

Installation of water & sewer piping. Inspected prior to backfilling, to confirm placement, depth, materials and to ensure that they are under test.(Recommended that a TQ Plumber be on site).

The following will be reviewed on site:

Sanitary Sewer

- 1. Pipe type, size (4" min), grade, depth and bedding material.
- 2. Approved connection for Underground.
- 3. Cleanout placement (one at property line or no more than 15m (50') away and one by foundation).
- 4. Working pressure test of 3m (10') water column or 35 kPa (5 psi) of air, for 15 minutes.
- 5. Inspection Chamber for new buildings.
- 6. As-built drawing submitted for filing (from building to property line).

The following will be reviewed on site:

Domestic Water Service

- 1. Pipe type, size (for hydraulic load) depth and bedding material.
- 2. Depth of pipe for frost protection; minimum 1.2 meters (4') landscaped areas & 1.5 meters (5') under driveways or other areas subject to surcharge (vertical load).
- 3. Approved connection for Underground.
- 4. Bedding material min 300 mm (12") coverage over top of piping.
- 5. Relationship to sanitary sewer pipe & other services if in the same trench;
- 6. Working pressure test of service pressure or or 700 kPa (100 psi) of air, for 2 hours.
- 7. City Connection (Curb Stop)
- 8. As-built drawings submitted for filing (from building to property line)

Please ensure that required service sizing and materials are in compliance with approved drawings and or permit.

Any reports, field reviews, surveys, etc. are required to be submitted prior to inspection. Send it to permits@penticton.ca

Information Bulletins:

Bulletins can be found at www.penticton.ca/permits/bulletins

Please Note!

- Connection backfilled before inspection
- No inspection called for.
- Drainage under water test is not at 3 m (10').
- Water service is not under test.
- Previous inspection deficiencies

BCBC 9.31& BCPC Part 2

All underground drainage, water piping and provision for venting and under test. Installation of drainage or water piping entering in to the crawlspace.

Overview:

Installation of under slab water & sewer piping. Inspected prior to placement of soil gas barrier (Radon) and pouring of concrete, to confirm materials, layout and to ensure that they are under test. Installation of any hydronic piping. Inspected prior to pouring concrete to confirm materials, layout, length of loops and that they are under. Required to remain under test until after pouring concrete. (Recommended that a TO Plumber be on site).

The following will be reviewed on site:

- 1. Deficiencies from previous inspection.
- 2. Piping type, size, grade and layout (for proper function and venting provision).
- 3. Floor drains in basement and/or mechanical rooms (provision to maintain trap seal).
- 4. Sump pumps & venting.
- 5. Working pressure test for Drainage: 3m (10') water column or 35 kPa (5 psi) of air, for 15 minuets.
- 6. Working pressure test for Water Piping: service pressure or 700 kPa (100 psi) of air, for 2 hours.
- 7. Working pressure test for Hydronic Heat Piping: as per manufactures specs. or 700kPa (100psi) of air, for the duration of the slab being poured.

Please ensure that required service sizing and materials are in compliance with approved drawings and/or permit.

Information Bulletins:

Bulletins can be found at www.penticton.ca/permits/bulletins

Critical Benchmark Inspection

Please Note!

- Drainage is covered making it unclear to confirm layout of piping.
- Drainage under water test is not at 3 m (10'). Water service is not under test.

Foundation/Slab Insulation

BCBC 9.36

Prior to backfilling foundation walls or pouring slabs where required insulation would be covered.

Overview:

Review the placement and insulation values of required insulation on foundation walls, under slabs and at the perimeter of slabs above the frost line. These values to be in conformance with the accepted energy model compliance report or prescriptive minimums of the BC Building Code (see chart below). All insulation to be inspected prior to covering or backfill.

The following will be reviewed on site:

- 1. Exterior foundation insulation thickness and placement of insulation;
- 2. Below slab insulation;
- 3. Perimeter slab insulation;
 - 4. Confirm conformance with energy model where applicable (see chart below)

Information Bulletins:

Bulletin 12-11 Cold Weather

Bulletins can be found at www.penticton.ca/permits/bulletins

Additions/Renovations

 To conform with prescriptive minimums of the BC Building Code

New Construction

- Conforms to the BC Energy Step Code
 - Working with BC Energy Advisor
 - Energy Model Compliance Report

Please Note!

- Deficiencies from previous inspection.
- Previous inspection task status not PASSED
- Thickness of insulation installed does not match energy advisor report; or prescriptive code minimums
- Reduction of insulation along slab edge is allowed in BCBC, however Energy advisor needs to confirm reduction is okay along slab edge, and it should be noted on the BC Energy Compliance Report if allowed

Soil Gas Control – Radon !



BCBC 9.13.4

Under slab radon control: After installation of under slab plumbing but prior to placing of slab insulation and concrete.

Overview:

Protection from soil gas ingress into building and to ensure provisions for radon mitigation.

The following will be reviewed on site:

- 1. Deficiencies from previous inspection;
- 2. Minimum 100mm course clean granular fill (or approved alternate solution);
- 3. 100mm pipe at or near the centre of each floor area or combined system (on each side of a continuous strip footing) stubbed up and labeled;
- 4. Location of air barrier (6 mil poly);
- 5. Air barrier lapped at seams minimum 300 mm;
- 6. Air barrier sealed around penetrations and perimeter with flexible sealant;
 - a. Requirements for next inspection.
- 7. Confirm exit location of the radon pipe at Framing Inspection

Information Bulletins:

<u>2013-05 – Radon Control for Part 9 Buildings</u>

Bulletins can be found at www.penticton.ca/permits/bulletins

Please Note!

- Penetrations through the air barrier have not been sealed correctly.
- Sealing of air barrier with flexible sealant is incomplete or inadequately installed.
- Insufficient amount of course granular material installed around radon vent pipe.
- Interior strip footings create unvented spaces (Radon pipe not interconnected on all sides of
- Radon pipe interconnected with other unit (Duplex)

Plumbing-Rough in

BCPC Part 2

All drainage piping, water piping and venting located within the building, stubbed out, capped and under test. Provision for any future plumbing fixtures installed.

Overview:

Installation of drainage, water and vent piping. Inspected prior to covering with insulation, vapor barrier, drywall or any other covering, to confirm materials, layout and to ensure that they are under test. Recommended that a TQ Plumber be on site.

The following will be reviewed on site:

Drain Waste and Vent

- 1. Piping type, size, grade and layout (for proper function, hydraulic loads and venting)
- 2. 3" building vent (one minimum).
- 3. Clean outs.
- 4. Support and protection of piping (striker plates)
- 5. Sump pumps and venting (union/check valve/shut off and manufactured approved discharge piping).
- 6. Working pressure test for Drainage: 3m (10') water column or 35 kPa (5 psi) of air, for 15 minuets.

Note: The B.C. Plumbing Code requires a water pressure test consisting of a water column of at least 3m (9.8') to all joints.

The following will be reviewed on site:

Water Distribution

- 1. Piping type, size and location (protection from freezing).
- 2. Main service piping type (dual check valve required for PE/municipal piping).
- 3. Support and protection of piping (striker plates).
- 4. Protection from contamination of water piping (CCC/Backflow provision)
- 5. Working pressure test of service pressure or 700 kPa (100 psi) of air for 2 hours

Note: The B.C. Plumbing Code requires a water pressure test that is at least equal to the maximum service pressure or an air pressure test of not less than 700kPa for a least 2hrs.

Information Bulletins:

Bulletins can be found at www.penticton.ca/permits/bulletins

Please Note!

- Permit package and drawings not onsite.
- Deficiencies from previous inspection;
- Insulation of the HWT INLET AND OUTLET PIPING.
- Drainage under water test is not at 3 m (10').
- Water service is not under test.

Framing

BCBC 9.23

Rough in Plumbing, Mechanical System and Electrical wiring to be in place **prior** to Framing Inspection **Overview:** To ensure that the structural loads of the building are transferred to the house foundation, where required conforms to the Energy Compliance Report as noted BC Step Code.

The following will be reviewed on site:

- 1. Approved plans and approved revised plans.
- 2. Field reports from the structural engineer or other professionals with no deficiencies
- 3. Mechanical ventilation checklist & heat loss calculations.
- 4. Framing design drawings of floor and roof systems including trusses, beams and end bearing.
- 5. Spatial separations of unprotected openings as per approved plans.
- 6. Proof of Exterior doors and window NAFS certification.
- 7. Roof truss, rafter, ceiling/floor joist installation: spans, bracing, nailing, hangars.
- 8. Roof ventilation.
- 9. Roof & wall sheathing thickness.
- 10. Framing details supporting fire separations. Preliminary review of required fire blocking and fire stopping. (see next section)
- 11. Cut, notch and drilling of framing members.
- 12. Sizing, spacing and height of wall studs.
- 13. Anchorage of building frame. Note special requirements for Z240 (mobile homes) & CSA A277 (Modular homes).

- 14. Columns, centrally located on footing pad or foundation wall size and attachment.
- 15. Lintel sizing for window/door openings.
- 16. Crawlspace and attic openings.
- 17. Radon pipe location to the exterior and labelling.
- 18. Stair construction rise, run, uniformity, head clearance.
- 19. Wooden stair stringers attachment, top and bottom.
- 20. Ramp slopes and guard heights.
- 21. Height of hinged walls and unsupported foundations.
- 22. Review of step design preventing cement steps against wood framing.
- 23. Building height and zoning setbacks including projections review of proposed finished grades.
- 24. Development permit conformance. Any changes to DP/DVP require prior approval
- 25. Retaining wall designs that are required to meet development permit requirements of grade and building heights

Information Bulletins:

Mechanical Ventilation Checklist

2018-03 When is a Structural Engineer Required?

Bulletins can be found at www.penticton.ca/permits/bulletins

Please Note!

- Fire Blocking missing at dropped bulkhead framing other location.
- Unapproved changes to structure
- Sealed truss & floor joist layouts not supplied.
- Electrical and HVAC and Plumbing Rough-In installation incomplete.
- Over height walls outside of BCBC.
- Framing Layout changes without structural review.
- Over spanned cantilevers outside of BCBC (Roof and Floors)
- Fire Blocking missing.

Fire Blocking / Fire Separations

BCBC 9.10

Prior to completion of the insulation inspection and before any assemblies are covered.

Overview:

- 1. Fire blocking is required in all buildings to limit the spread of fire. Specifically Fire blocking is required to separate concealed vertical spaces from concealed horizontal spaces and to divide larger open concealed spaces such as large attics and large crawlspaces as per BCBC 9.10.16.
- 2. Fire separation assemblies are required in almost all buildings except for single family homes and some small commercial buildings. Fire Separations are required as per BCBC 9.10.8 and part 3 of the BCBC. Fire Separation assembly detail will be found on your approved building permit drawings. Details of when and how a fire separation can be penetrated can be found in these sections of the BCBC.

The following will be reviewed on site:

Fire Blocking

- 1. Deficiencies from previous inspection;
- 2. Location of required blocking (see the City of Penticton provided illustrated guide)
- 3. Materials used as fire Blocking

The following will be reviewed on site:

Fire Separations and Fire Stopping:

- 1. Deficiencies from previous inspection;
- 2. Conformance of materials and their placement in conformance with the design of the approved separation.
- 3. Penetrations of fire separations including the size and material penetration them
- 4. Conformance of fire stopping materials to ULC/CSA S115 used as part of the approved assemblies
- 5. Concealed spaces above fire separations

Information Bulletins:

COP Fire Blocking Location illustration/Guide

Bulletins can be found at www.penticton.ca/permits/bulletins

Please Note!

- Dropped bulkhead framing and required Fire blocking not installed correctly or not at all.
- Use of unrated fire stopping materials (typically foams) used in error
- Drywall not tightly fit to penetrations
- Damage from previous renovations to an existing separation
- Improper framing to support the separation as in double wall assemblies
- Missing elements such as insulation or resilient channel as required by the fire separation design

Insulation and Vapour/Air Barrier



When thermal insulation and vapour barrier are complete and before drywall or paneling.

Overview: To ensure sufficient insulation, vapour and air systems are installed to prevent condensation and that the energy conservation standards are complied with.

The following will be reviewed on site:

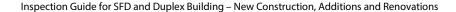
- 1. Deficiencies from previous inspection;
- 2. Mechanical Ventilation Checklist and Heat Loss Calculations to be submitted:
- 3. Review fire blocking and fire stopping where not inspected at framing inspection;
- 4. RSI value, type & installation between wall studs, foundation, crawlspace, floor joists, attic space; and where required, conforms to the Energy Compliance Report.
 - a. New Construction: Mid-Construction Step Code Compliance Report
 - b. Additions/Renovations: Conforms with prescriptive minimums of BCBC
- 5. Placement of air/vapour barrier lapped & sealed. Red Tuck Tape is not permitted.
- 6. Air barrier location on garage wall
- 7. Attic and crawl space ventilation
- 8. Attic hatch to be weather-stripped;
- 9. Provide adequate interior/exterior air barrier;
- 10. All penetrations of vapour and air barriers to be sealed
- 11. Solid Backing behind all poly boots (must be sealed)
- 12. Exposed spray foam to be covered
- 13. Exposed poly to be protected from damage
 - Trade-offs (RSI value) for piping located in the exterior walls?
 - Frost protection for water lines or traps located in the exterior walls?
- 14. Sheathing membrane completed and installed accordingly
- 15. Plumbing Rough-In Inspection passed

Information Bulletins:

Bulletin 2012-13 – Air Barrier Details

Please Note!

- Missed sealing of top plate penetrations to attic
- Previous Plumbing and/or Mechanical inspections and deficiencies uncorrected.
- Building sheathing membrane not fully completed
- Windows and doors not sealed around
- Reduction of insulation along garage wall not allowed if not on BC Energy Compliance Report
- Insulation values do not match BC Energy Compliance Report; if applicable
- Fire blocking incomplete
- Exterior air barrier covered up before inspection



Plumbing - Final

Overview: Plumbing requirements for occupancy/partial occupancy.

Plumbing & Cross Connection C/Backflow provision

- 1. Confirm plumbing cleanouts and shut offs.
- 2. Plumbing fixtures (approved type, materials and connections).
- 3. Water meter installed;
- 4. Water hammer arrestors (laundry supply and dishwashers).
- 5. Pressure reducing valve (PRV) and meter installed.
- 6. Cross Connection/Backflow valve(s) installed as required (Dual Check on Irrigation and cold only water service lines
- 7. Expansion tank installed.
- 8. Domestic hot water system has inlet and outlet piping insulated within the first 6' (2m) of storage tank or heating vessel, with ½" (12mm) min. wall thickness.

Note: The B.C. Plumbing Code requires protection from thermal expansion by way of an Expansion Tank or Thermal Expansion Relief Valve. It is not related to the type of heating vessel but if there is a check valve, backflow preventer or pressure reducing valve (PRV) installed

Information Bulletins:

<u>Bulletin 2013-03 Glass Guardrail Requirements</u> <u>Fire Alarm Verification Report</u> Sub-Contractor's List

Bulletins can be found at www.penticton.ca/permits/bulletins

Please Note!

- Water lines on the inlet and outlet of the heating vessel are not insulated.
- Expansion take is not installed when there is a tank-less heating vessel.

Occupancy Of Project !

OCCUPANCY OF PROJECT

Failure to obtain an Occupancy Certificate could result in significant fines per day and further enforcement action such as a Section 57 Notice on Title.

Building Bylaw 2018-01 – Part 14

This inspection is booked when the project has been completed and is ready for occupants. No person may occupy a building or structure or part of a building or structure until an Occupancy inspection has been requested and conducted by a building official.

All previously noted deficiencies MUST be completed, all required documents MUST be received, all fees must be paid and any Planning or Development Engineering requirements MUST be completed.

Optional: Partial Occupancy

Upon request, a building official may issue a Partial Occupancy Certificate for a portion of a building or structure under construction when the Building permit substantially complies with "health and life safety requirements". All outstanding fees (i.e. partial occupancy deposit, re-inspection fees, permit extension, etc.) are to be paid.

See <u>Bylaw Notice Enforcement Bylaw</u> to confirm current amounts of fees and penalties at <u>https://www.penticton.ca/city-hall/bylaw-directory</u>

Information Bulletins:

15-04 Section 57 Notice on Title

Bulletins can be found at www.penticton.ca/permits/bulletins

Please Note!

Most common missed items at occupancy:

- Addressing not posted;
- Hot and cold water lines on hot water tank not insulted first 6 feet or where pipes enter wall:
- Attic hatch missing gasket;
- Water hammer missing for dishwasher;
- Exterior stairs off decks or side of building missing graspable handrail;
- Over sized driveways at street access;
- Solid venting missing when venting less then 1.2m to property line;
- Continuously running fan with separate switch located in a separate location when no HRV;
- Self-closing and latching door for garage;
- Flashing end damns over horizontal transitions;
- Thermal Expansion Tanks; and
- Range ventilation not connected.
- For projects involving a Development Permit or Development Variance Permit, ensure your conditions are met. Reach out to the Planning team at planning@penticton.ca

Occupancy (Partial Occupancy)

Overview: To provide an environment of health and safety for occupants.

Upon request, a building official may issue a Partial Occupancy Certificate for a portion of a building or structure under construction when the Building permit substantially complies with "health and life safety requirements". All outstanding fees (i.e. partial occupancy deposit, re-inspection fees, permit extension, etc.) are to be paid.

The following will be reviewed on site:

- 1. All relevant paperwork to be submitted prior to field inspection:
 - Electrical/Gas ensure all work is completed and safe to use. One way to achieve this is to provide copies of the completed:
 - Electrical Work: "<u>Declaration of Compliance</u>"
 - Gas Work: "Gas Notification of Completion, Installation or Alteration"
 - On-site sewerage installation confirmation (if applicable);
 - Ventilation checklist, heat loss calculations;
 - Schedule C-B(s) from Engineer(s) of record and Schedule C-A (if applicable);
 - BC Energy Compliance Report: As-Built
 - Sub-contractor list;
 - As-built drawings, if required.
- 2. Deficiencies from previous inspection;
- 3. General conformance with approved permit drawings;
- 4. Fire Alarm Systems commissioned (if applicable);
- 5. Access to principal door note accessible requirements (if applicable);
- 6. Firestopping or Fireblocking systems complete;
 - 7. Interior and exterior handrails and guards;
 - 8. Functional smoke alarms and carbon monoxide detectors;
- 9. Floor coverings in place (where required);
- 10. Access to crawlspace & attic;
- 11. Attic insulation levels and exposed insulation;
- 12. Completion of soffits (open/closed soffits);
- 13. Functioning ventilation system (bathrooms, kitchen);
- 14. Radon piping completed;
- 15. Heating system operational;
- 16. Required egresses bedroom windows and exits;
- 17. Doors between garage and house weather-stripped and self-closing;
- 18. Dead bolt latches, door viewer. Egress window well clearances;
- 19. Grade clearance to cladding;
- 20. Roof vents installed;
- 21. Driveway width conforms;
- 22. If applicable, site constructed sanitary sewage system "Approval to Operate" by the OSWWP (on site waste water professional)
- 23. Address numbers installed & visible from the street.

Occupancy

Overview: No person may occupy a building or structure or part of a building or structure until an Occupancy inspection has been requested and conducted by a building official. Please refer to your permit condition letter for specifics to your project.

The following will be reviewed on site:

- 1. All conditions placed on Partial Occupancy Certificate maintained and met;
- 2. Previous Occupancy Inspection deficiencies;
- 3. Development permit conditions review (where applicable) Security and Landscaping Deposit will be returned at the Completion of the project;
- 4. Retaining and drainage systems complete;
- 5. Grading around building is sloped away from foundation;
- 6. Clearances from grade to cladding;
- 7. All penetrations in exterior cladding sealed;
- 8. Flashing/end dams above openings in place;
- 9. Downspouts attached and drained to a suitable location (as directed by geotechnical engineer where applicable "Schedule C-B");
- 10. Surface drainage maintained on property (as directed by geotechnical engineer where applicable "Schedule C-B");
- 11. All documentation and homeowner training for residential sprinklers has been conducted by developer or contractor.

Refer to Bulletins:

2012-05 Retaining Wall Requirements Bulletin

2013-03 Glass Guardrail Requirements Bulletin

Fire Alarm Verification Report

Sub-Contractor's List

Bulletins can be found at www.penticton.ca/permits/bulletins

HAVE QUESTIONS? WE'RE HERE TO HELP.

PLEASE CONTACT THE BUILDING DEPARTMENT AT 250 490-2501 OR BUILDINGINFO@PENTICTON.CA FOR FURTHER INFORMATION

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Please note: Building Bulletins are prepared to provide convenient information for customers, and should not be considered a replacement for reviewing the bylaw or associated legal documents. If there is any contradiction between this guide and relevant municipal bylaws and/or applicable codes, please refer to the bylaws and/or codes for legal authority.