

# Single Family New Construction Required Inspection Stages Master Requirement GEN 110

Building Department: 604-990-2480, [building@dnv.org](mailto:building@dnv.org), fax: 604-984-9683

## Purpose

The following procedure is meant as a guideline to aid Homeowners, Builders, and Contractors in the proper preparation of requesting inspections. Inspections help to ensure that renovation or construction work complies with the appropriate Bylaws and matches the work authorized by the Building Permit.

## Notice

- **This document is provided as an advisory only, and may be revised as needed. In no way does it relieve any person from complying with all other relevant Bylaws, regulatory acts, requirement of the permit, order or licence**
- **The following list of inspections and required documents outline the minimal inspection requirements and are intended to help you prepare for and schedule your inspections**
- **At every inspection stage, the Inspector may not enter the site if it is deemed unsafe and Work Safe BC may attend the site**

## Re-Inspection Fee Policy

Owners and contractors have the responsibility to carry out the work as per approved plans and call for inspections at the required stages, as well as to resolve any deficiencies noted by the Inspector(s).

A re-inspection fee may be applied for the following reasons:

- Failure to correct previously noted deficiencies
- Contractor or owner requesting an inspection when the site is not ready,
- If required documentation or representative is not on site as required by the Inspector,
- Any other reason similar to above as determined by the Building Official.

## How to Book Inspections

- Building and mechanical inspections are booked online at [www.dnv.org/inspection](http://www.dnv.org/inspection)
- Electrical inspections are requested by submission of the *Electrical Contractor's Authorization and Declaration of Compliance*, either by email to [electricaldept@dnv.org](mailto:electricaldept@dnv.org), by fax, or in person

Inspection requests submitted by 2:30pm will be scheduled for the following business day unless otherwise requested.

## PRE-CONSTRUCTION INSPECTION (Good Neighbour Meeting)

**This inspection is required prior to the issuance of the demolition permit, and is attended by the building official(s), the constructor, and the owner.**

**Attn: Owner, General Contractor and drainage permit contractor:**

If a storm water pump is required to convey storm water drainage to the municipal storm system or an alternate approved discharge location, the Owner must grant to the District a covenant under section 219 of the Land Title Act.

The final inspection and Occupancy Permit will not proceed when a storm water pump covenant is required but not registered on title. Refer to [www.dnv.org/storm-pump](http://www.dnv.org/storm-pump) for more details.

- Review of good neighbour guidelines: communication, construction signage and contact information, damage to public property and encroachment, permitted construction hours
- Review of street use permits and temporary building zone permits, construction parking and traffic
- Waste containers and removal, sanitary facilities
- Provision of site water and temporary power
- Requirement for storm pump covenant
- Review BC OneCall 'Call Before You Dig' guidelines

### \*Temporary Power Construction Service

***This inspection is generally done prior to demolition, and conducted by the Electrical Inspector***

- Power pole must be installed a minimum 3.3m (10ft) from any District services and within 3.3m(10ft) from the property line
- Provide grounding at a minimum of 0.6m (2ft) depth
- Adequate bracing support (minimum 2 braces at 90°)
- Proper clearances across roads, alleys, and sidewalks
- Meter height to be 1.5m – 1.7m (4.5ft -5.1ft) as per BC Hydro meter requirements)

### **Required documents to be provided prior to inspection and available on site:**

- ✓ Hazardous material disposal clearance letter

## EROSION AND SEDIMENT CONTROL (ESC) INSPECTION

**This inspection is the first inspection to be booked after demolition and before the form inspection, prior to placement of any concrete. The ESC inspection must be passed before the footings and forms inspection can be booked.**

### Sediment and erosion control

- Measures in place as per the District's Development Servicing Bylaw 8145 and Environmental Protection and Preservation Bylaw 6515:
  - ✓ Compliance with all on-site sediment and erosion control
  - ✓ On-site grading, building elevation, storm drainage and management
  - ✓ Catch basins have appropriately-fitted sediment traps/filter cloths which must be maintained and replaced as needed to allow proper drainage
- Construction fencing, tree barriers
- Meets WCB guidelines or an excavation letter provided by a professional engineer

## FOOTINGS AND FORMS INSPECTION

### Footings & Forms

- Location of forms meets approved plans
- Minimum frost protection of 18" in all areas
- Depth and width of foundation form matches approved plans
- Foundation wall height to match approved grades
- If footings are placed prior to forms, then separate inspections will be required for both

### **Required documents to be provided prior to inspection and available on site:**

- ✓ Non-encroachment certificate
- ✓ Site Survey
- ✓ Excavation letter (if applicable)
- ✓ Approved plans, field reports and professional engineer field memos
- ✓ Professional engineer compaction test report for any fill in excess of 1ft

## **SITE SERVICING, UNDERGROUND AND UNDERSLAB INSPECTIONS**

**These inspections are performed after the footings and forms inspection, but before backfilling against the foundation.**

### Electrical Service and Low Voltage

- Trench to be open at required depth and debris removed
- Cable or conduit installed. Cable to be bedded in sand
- Marking tape installed 0.3m (1ft) below finished grade (if required)

### Drainage, Gas, Heating, Plumbing

#### ***These inspections are completed by the Mechanical Inspector***

- Perimeter drainage (drain tiles), rain water leaders, sumps
- Underground water, sanitary and storm services
- Foundation drainage piping, dampproofing of foundation walls
- Drainage waste vent system piping
- Radiant heating piping and below slab insulation, including insulation and dampproofing prep done together
- Poly is installed for underslab and sealed around perimeter for dampproofing/waterproofing method
- Insulation and vapour barrier under the slab is complete and sealed
- Appropriate R-value rigid insulation is installed under the entire slab, between the slab, and all exterior foundation walls as a thermal break

### Underslab with No Radiant Heating

#### ***This inspection completed by the Building Inspector***

- Insulation and vapour barrier under slab is complete and sealed
- Poly is installed for underslab and sealed around perimeter for dampproofing/waterproofing method
- Appropriate R-value rigid insulation is installed under the entire slab, between the slab, and all exterior foundation walls

### **Required documents to be provided prior to inspection and available on site:**

- ✓ Letter sized drainage plan
- ✓ Backflow prevention test certificate
- ✓ BC Building Code Schedule A (if applicable) and Schedule B for storm pumps
- ✓ Specialized foundation building materials may require a letter from a professional engineer and/or a letter from the manufacturer for the approved dampproofing method
- ✓ Professional engineer letter for soil compaction or slab reinforcement where required

## ELECTRICAL AND MECHANICAL ROUGH-IN INSPECTIONS

**These inspections are to be completed prior to frame inspection.**

### Electrical

- After all branch circuits are in place, dedicated circuits for all heating loads (i.e. boiler, baseboard, furnace) and circuit loading does not exceed maximum allowed
- Cables terminated in appropriate boxes, splicing and bonding complete
- Service prepared, and service equipment installed with home runs entered in panel
- Outlets, switches, and lighting are not to be installed
- Proper clearances provided for hot water lines, hot air ducts and B-vents (furnace venting)
- Provide the main service load, load calculation (if required)

### Mechanical

- Heating distribution piping and/or duct work, appliance venting, gas piping, combustion air and gas fireplace framed and firestopped
- Completed rough plumbing (DWV, water piping)
- Solar-ready installation completed
- Underground water supply to sprinkler system must be flushed clean, piping installed according to approved fire sprinkler plan complete with bracing, supports, and piping under hydrostatic test
- Underground gas piping to be installed to a minimum of 15" bury depth and under air test for inspection (where applicable)
- All drop ceilings and other sprinkler spray obstructions must be installed for inspection
- Standing water test for tub and shower, water piping and accessible shut off valves for all fixtures
- Any plumbing systems below slab must be inspected prior to cover
- Provide clearances from combustion and venting air

### **Required documents to be provided prior to inspection and available on site:**

- ✓ Backflow preventer test certificate
- ✓ Air test certificate

## FRAME INSPECTION

The framing inspection is conducted after all electrical, mechanical, and gas rough-ins are completed, and prior to the installation of insulation.

The Building Department no longer inspects any part of the building envelope (sheathing, pre-clad, cladding).

- Building frame and roofing is complete
- Doors and windows are installed
- All fireplaces (chimney, ductwork, piping is installed) are complete

### **Required documents to be provided prior to inspection and available on site:**

- ✓ Professional engineer certificate for framing and sheathing
- ✓ Professional engineer letter and drawings for roof trusses specifications
- ✓ Mechanical Ventilation checklist
- ✓ Structural engineer field memo for placed stairs
- ✓ Building envelope field review or field memo
- ✓ Engineered floor layout must be sealed by professional engineer (if applicable)
- ✓ Approved plans, field reports and professional engineer field memos

## INSULATION AND VAPOUR BARRIER

This inspection is performed after in-slab plumbing and radiant heating and frame inspections.

Please note: Effective July 1, 2018, all residential buildings will have to demonstrate compliance with the BC Energy Step Code.

Refer to Part 14 of the Construction Bylaw 8271 with respect to mandatory Energy Step Code requirements.

**New single family construction:** The Building Official will rely solely on the building envelope professional's field reviews and letters of assurance in lieu of the inspection.

**Renovations and additions:** Insulation and vapour barrier underslab inspections must be conducted by the Building Official

**Required documents to be provided prior to inspection and available on site:**

- ✓ Building envelope field review or field memo
- ✓ Letters of Assurance provided at BP application for building envelope
- ✓ Approved plans, field reports and professional engineer field memos

## FINAL ELECTRICAL AND MECHANICAL

**These inspections must be completed, and all required documentation must be received prior to requesting a final building inspection.**

### Electrical

- All service, primary wiring and low voltage wiring is complete
- Panel directories are completed or blanks are filled in
- All fixtures and devices installed with cover plates
- Light switches are functional, smoke alarm and carbon monoxide detectors are functional

### Mechanical

- All fixtures are installed and in good working condition (no leaks, hot/cold water supply to all fixtures is appropriate)
- Gutters and downspouts are connected to underground storm drainage system, property line inspection chambers are complete
- Gas appliances are installed with appliance manuals and relevant information sheets attached
- Sumps and catch basins are open for inspection
- Furnaces, water heaters, and gas fires to be fired and functional for inspection

**Required documents to be provided prior to inspection and available on site:**

- ✓ **If a storm pump is on site, a Storm Pump Covenant must be registered on title** and a copy provided to the District
- ✓ Schedule C from all registered professionals (as applicable) provided to the District

**FINAL BUILDING**

**This inspection is done once all subtrades permits have successfully passed their respective final inspections and the permits have been closed.**

**Attn: Owner, General Contractor and drainage permit contractor:**

If a storm water pump is required to convey storm water drainage to the municipal storm system or an alternate approved discharge location, the Owner must grant to the District a covenant under section 219 of the Land Title Act.

**The final inspection and Occupancy Permit will not proceed when a storm water pump covenant is required but not registered on title.** Refer to [www.dnv.org/storm-pump](http://www.dnv.org/storm-pump) for more details.

- Building is complete and ready for occupancy (but prior to occupancy)
- All exterior rough-grading in place
- Driveways and sidewalks installed
- Exterior guards in place

**Required documents to be provided prior to inspection and available on site:**

- ✓ All final letters of assurance
- ✓ Documentation for any installed interior glass guards