

# *Hart Home Inspections*

## Home Inspection Report



123 Inspection Rd NW, Summerville, Calgary , Alberta

Inspection prepared for: Keen Buyer  
Date of Inspection: 3/6/2020 Time: 4 pm  
Age of Home: Built 1995 Size: Approx 2300 sq ft

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## Report Summary

The summary below consists of potentially significant findings. These findings can be a safety hazard, a deficiency requiring a major expenses to correct or items I would like to draw extra attention to. The summary is not a complete listing of all the findings in the report, and reflects the opinion of the inspector.

Please review all of the pages of the report as the summary alone does not explain all the issues. All repairs must be done by a licensed & bonded trade or profession. I recommend obtaining a copy of all receipts, warranties and permits for the work done. Regardless, in recommending service we have fulfilled our contractual obligation as generalists, and therefore disclaim any further responsibility. This report is the exclusive property of the Inspection Company and the client whose name appears herewith, and its use by any unauthorized persons is prohibited.

Roof		
Page 10 Item: 3	Roof Comments	<ul style="list-style-type: none"> <li>• Untreated pine shakes observed. Damage evident. The cost of <b>repairs</b>/replacing the roof may significantly affect your evaluation of the property. Specialist evaluation recommended</li> </ul>
Exterior		
Page 16 Item: 1	Gutter Condition	<ul style="list-style-type: none"> <li>• Downspout discharges water at <b>foundation</b>. Recommend installation of extension to ensure proper drainage away from foundation to prevent seepage.</li> </ul>
Page 21 Item: 14	Deck Condition	<ul style="list-style-type: none"> <li>• There are <b>components</b> of the wood deck that are structurally unsound. Especially the staircase. We can elaborate on this issue, but the deck should be evaluated by a specialist and serviced accordingly. When a deck is attached to a building, the part of the deck that gets supported by the earth needs to have proper frost footings. The most common deck footing is basically a big chunk of concrete poured in to a hole in the earth. The goal is to have this chunk of concrete go deep enough in to the ground so that the bottom rests on soils that never freeze, which should prevent the soils from pushing the footing up. When deck footings aren't poured deep enough, decks can heave. Sandy, well drained soils aren't particular susceptible to frost heave, while soils with higher clay content are prone to frost heave. This is why it's so important for deck footings to extend down below the frost line.</li> </ul>
Page 25 Item: 17	Lot Grade and Drainage Conditions	<ul style="list-style-type: none"> <li>• Grading and drainage is either negative or neutral adjacent to the residence, and moisture intrusion will remain a possibility. The soil or the hard surfaces should slope away from the residence to a distance of at least six feet, to keep moisture away from the footings.</li> </ul>
Garage		

Page 31 Item: 3	Fire Door Conditions	<ul style="list-style-type: none"><li>• The house entry door is not self-closing and is required to be, to maintain the necessary firewall separation between a garage and living quarters, and will need to be serviced. Doors between an attached or built-in garage and a dwelling unit shall be tight fitting and weather-stripped to provide an effective barrier against the passage of gas and exhaust fumes and shall be fitted with a self-closing device.</li></ul>
Heating		
Page 67 Item: 4	Humidifier	<ul style="list-style-type: none"><li>• Leaks at solenoid valve. Water shutoff valve closed to prevent further water damage</li><li>• Humidifier duct has separated. To be repaired</li></ul>
Kitchen		
Page 78 Item: 5	Kitchen Sink Condition	<ul style="list-style-type: none"><li>• Sink is loose, suggest securing and seal as necessary. Held up by pieces of wood</li></ul>
Page 79 Item: 12	Microwave	<ul style="list-style-type: none"><li>• Microwave connected to an outlet mounted to the exhaust fan cover. Electrician to advise for proper installation to meet current requirements</li></ul>

## General Information

This report is the exclusive property of HART HOME INSPECTIONS and the client whose name appears herewith, and its use by any unauthorized persons is strictly prohibited. The observations and opinions expressed within this report are those of HART HOME INSPECTIONS and supercede any alleged verbal comments.

We inspect all of the systems (operating the item under normal operating control), components, and conditions described in accordance with CAN CSA-A770-16 standards. Refer to the inspection agreement package emailed or handed to you which includes the CAN CSA-A770-16 standard practice for performing a general home inspection.. Those that we do not inspect are clearly disclaimed in the contract and/or in the aforementioned standards. However, some components that are inspected and found to be functional may not necessarily appear in the report, simply because we do not wish to waste our client's time by having them read an unnecessarily lengthy report about components that do not need to be serviced.

NOTE: Although infrared thermal imaging is a far better diagnostic tool than the naked eye, it does not guarantee 100% accuracy, unless removal or destruction of components can be achieved to validate findings. When possible, other tools are used to verify thermal images, but even with these considerations we do not claim to have x-ray vision. Conditions may change and cause the apparent temperatures revealed on thermal images to be different at any given time.

Bathrooms can consist of many features from whirlpool/jacuzzi tubs and showers to toilets and bidets. Because of all the plumbing involved it is an important area of the house to look over. Moisture in the air and leaks can cause mildew, wallpaper and paint to peel, and other problems. The home inspector will identify as many issues as possible but some problems may be undetectable due to problems within the walls or under the flooring. In accordance with industry standards, we do not comment on common cosmetic deficiencies, and do not evaluate window treatments, steam showers, and saunas. More importantly, we do not leak test shower pans.

This inspection does not include testing for radon, mold, PCB (polychlorinated biphenyls) or other hazardous materials. The home inspector will identify as many issues as possible but some problems may be undetectable due to problems within the walls or under the flooring. Note that if in a rural location, sewer service and/or water service might be provided by private companies.

Inspection, testing, analysis, or opinion of condition and function of private waste disposal systems and wells is not within the scope of this home inspection. Recommend consulting with a specialist concerning private systems and inspection.

Interior areas consist of bedrooms, baths, kitchen, laundry, hallways, foyer, and other open areas. All exposed walls, ceilings and floors will be inspected. Doors and windows will also be investigated for damage and normal operation. Although excluded from inspection requirements, we will inform you of obvious broken gas seals in windows. Please realize that they are not always visible, due to temperature, humidity, window coverings, light source, etc. Your inspection will report visible damage, wear and tear, and moisture problems if seen. Personal items in the structure may prevent the inspector from viewing all areas, as the inspector will not move personal items. An inspection

does not include the identification of, or research for, appliances and other items that may have been recalled or have had a consumer safety alert issued about it. Any comments made in the report are regarding well known notices and are provided as a courtesy only. Product recalls and consumer product safety alerts are added almost daily. We recommend visiting the following Internet site if recalls are a concern to you: <http://www.hc-sc.gc.ca/cps-spc/index-eng.php>

Properties being inspected do not "Pass" or "Fail." - The following report is based on an inspection of the visible portion of the structure; inspection may be limited by vegetation and possessions.

Depending upon the age of the property, some items like GFI outlets may not be installed; this report will focus on safety and function, not current code. This report identifies specific non code, non cosmetic concerns that the inspector feels may need further investigation or repair. An old home will meet the code in the year it is built; however, new homes will have to meet today's building code

IN ACCORDANCE WITH THE TERMS OF THE CONTRACT, THE SERVICE

RECOMMENDATIONS THAT WE MAKE IN THIS REPORT SHOULD BE COMPLETED WELL BEFORE THE CLOSE OF ESCROW BY A LICENSED SPECIALIST, WHO MAY WELL IDENTIFY ADDITIONAL DEFECTS OR RECOMMEND SOME UPGRADES THAT COULD AFFECT YOUR EVALUATION OF THE PROPERTY.

For your safety and liability purposes, we recommend that licensed contractors evaluate and repair any critical concerns and defects. Note that this report is a snapshot in time. We recommend that you or your representative carry out a final walk through inspection immediately before closing to check the condition of the property, using this report as a guide.

What is a Home Inspection: A Home Inspection is a non invasive visual examination of a residential dwelling, performed for a fee, which is designed to identify observed material defects within specific components of said dwelling. Components may include any combination of mechanical, structural, electrical, plumbing, or other essential systems or portions of the home, as identified and agreed to by the Client and Inspector, prior to the inspection process. A home inspection is intended to assist in evaluation of the overall condition of the dwelling. The inspection is based on observation of the visible and apparent condition of the structure and its components on the date of the inspection and not the prediction of future conditions.

A home inspection will not reveal every concern that exists or ever could exist, but only those material defects observed on the day of the inspection. A material defect is a condition with a residential real property or any portion of it that would have a significant adverse impact on the value of the real property or that involves an unreasonable risk to people on the property. The fact that a structural element, system or subsystem is near, at or beyond the end of the normal useful life of such a structural element, system or subsystem is not by itself a material defect. An Inspection report shall describe and identify in written format the inspected systems, structures, and components of the dwelling and shall identify material defects observed. Inspection reports may contain recommendations regarding conditions reported or recommendations for correction, monitoring or further evaluation by professionals, but this is not required.

We appreciate the opportunity to conduct this inspection for you! Please carefully read your entire

Inspection Report. Call us after you have reviewed your report, so we can go over any questions you may have. Remember, when the inspection is completed and the report is delivered, we are still available to you for any questions you may have, throughout the entire closing process.

#### Exclusions

The following activities are not required for a home inspection:

- a) predicting the probability of failure or remaining service life of any system or component;
- b) determining the causes of conditions identified;
- c) determining the method for remediation of conditions identified;
- d) estimating costs or providing quotes for remediation of conditions identified;
- e) advising on the suitability of the building, component, or system for a particular use;
- f) advising on purchase or suitability for the client;
- g) predicting operating costs associated with a system, component, or the building;
- h) identifying hidden or not visually apparent infestations of vermin, including wood destroying organisms;
- i) identifying hidden or not visually apparent hazardous items (e.g., asbestos, mould, PCB);
- j) identifying underground components (e.g., oil tanks, septic fields, underground drainage systems);
- k) making judgements about the aesthetics or quality of finishes, cosmetic items, or decorative items;
- l) inspecting household appliances; and
- m) inspecting onsite water supply or sewage systems

#### 1. Inspector

Braam Hart

#### 2. Persons in Attendance

- Buyers
- Buyers Agent

#### 3. Occupancy

• The property is vacant. The inspector is unable to determine the period of time this house has been unoccupied. Major systems were reviewed during the home inspection. Plumbing related fixtures, appliances and piping systems were reviewed for appropriate function and leaks (if turned on as requested), as applicable, at visible areas. However, due to non-use of plumbing and other major systems for a period of time it is important that these systems be reviewed during your final walk-through prior to closing and closely monitored for a few months after occupancy for evidence of leaks and other problems. We also suggest monitoring visible areas of sub-flooring, under showers, commodes and tubs for wet conditions during this same period.

#### 4. Levels

- 2 Story

## Roof

Roofing materials. As homes age, so does the material covering the roof. This is the component of the house that keeps us and the internal workings of the house dry. As the roofing material ages, it lends itself to water intrusion and can lead to expensive repairs or even replacement. If roofing material is improperly installed, it can lead to premature aging. There are many types of roofing materials used to protect us from the elements. The most common, starting with the most economical, are asphalt shingles, wood shakes/shingles, terra cotta tile, concrete tiles and slate, just to name a few.

Asphalt shingles.

Life Expectancy of Roof Shingles

Shingles are made in different weights. The heavier the weight of the shingle, the longer it will last. The life expectancy of the shingles will be determined by the many factors that will all have a bearing on how long they will last. How well the attic is ventilated will make a difference to the shingles life expectancy, the hotter the attic is the shorter the life of the shingle. The color of the shingle, light colors do not get as hot as black. The prevailing wind, most houses have a roof that has shingles that are worn out on the side that gets the most weather, shingles on the sheltered side get less wear. The life expectancy of shingles is affected by both the pitch (slope) of the roof and the weather. Hot summers and harsh winters will reduce the life of the shingle. Roofing manufacturers label and sell their shingles as twenty, twenty-five, or thirty-year shingles. This is the length of time the shingle would be expected to last in a perfect climate. Twenty year shingles do not usually last much longer than about fifteen years and may show signs of deterioration between ten and twelve years. Twenty-five year shingles have a useful life of about eighteen to twenty years. Thirty-year shingles have about a twenty-five year life expectancy.

Inspect the roof regularly, when it begins to look a little rough it's probably time for a re-roof. If its too high to get on, use a pair of binoculars.

Wood shingles and shakes will show similar symptoms as asphalt when aging. Cupping, curling, lifting, splitting, insect damage, rotting and missing sections are all possible.

Terra cotta, concrete and slate tiles have life expectancies of about 20 to 100+ years. These materials are very brittle. Expansion and contraction caused by the changing seasons will cause these tiles to crack or become loose. Walking on these tiles can be deadly to the material. Cracking and the signs of aging can be difficult to see from the ground. It will usually take a good pair of binoculars and a solid ladder to get a bird's eye look at the condition of the roof. Keep an eye on the condition of the ridge tile sement to ensure no pieces are loose or missing. This may cause moisture leaks.

Adequate attic ventilation, solar / wind exposure, and organic debris all affect the life expectancy of a roof. Always ask the seller about the age and history of the roof. On any home that is over 3 years old, experts recommend that you obtain a roof certification from an established local roofing company to determine its serviceability and the number of layers on the roof. We certainly recommend this for any roof over 5 years of age. Metal roofs in snow areas often do not have gutters

and downspouts, as there is a concern that snow or ice cascading off the roof may tear gutters from the house. Likewise, be advised that such cascading may cause personal injury or even death. If this house has a metal roof, consult with qualified roofers or contractors regarding the advisability of installing a damming feature which may limit the size and amount of snow / ice sliding from the roof.

#### 1. Methods Used to Inspect Roof

Roof was visually inspected from accessible points on the exterior with field glasses and or camera. If a roof is too high, is too steep, is wet, too cold that may cause damage when walked on, or is composed of materials which can be damaged if walked upon, the roof is not mounted. Therefore, client is advised that this is a limited review from a distance and a licensed roofer should be contacted if a more detailed report is desired.

#### 2. Roofing Material

Material:

- Pine shakes

## 3. Roof Comments

fair	review often	repair	not visible	safety
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## • Pine Shakes

## Fact Sheet and Information For Owners

\* Untreated pine shakes have been used as a roofing material in Alberta since the late 1980s. Their inclusion in the Building Code was based on reports from national housing agencies, research agencies and standard writing organizations, such as the Canadian Standards Association.

\* Untreated pine shakes were not authorized for use under the Building Code for areas receiving more than 500 mm of precipitation annually.

\* Neither the Canadian Standards Association nor the Alberta Building Code deals with the service life of any given product.

\* In June 1997, Alberta Labour became aware of a concern that untreated pine shakes were being infested by fungus.

\* As a result of concerns raised about fungal infestation, the Building Technical Council of the Safety Codes Council reviewed submissions from companies and individuals involved in manufacturing, treating, certifying and inspecting pine shakes, and in timber research.

\* Alberta Labour and the Building Technical Council wrote to manufacturers of pine shakes, to municipalities, and to other interested parties in January 1998 setting out concerns that had arisen about untreated pine shakes, and recommended that customers become informed about the product's performance history before deciding to use it, or to continue using it.

\* The Building Technical Council recommended that pine shakes be treated. That recommendation was accepted and as of June 1, 1998 all pine shakes had to be treated with appropriate preservatives prior to use.

\* Anyone concerned about the durability or suitability of untreated pine shakes should promptly take those concerns to the manufacturers, suppliers, roofers or home builders involved. These persons may have provided warranties on untreated pine shakes. Legal advice can be sought about whether there is a warranty, and how to enforce it.

\* Concerned individuals should also obtain information about whether their concerns with untreated pine shakes are covered by insurance. A useful source for general insurance information is the Insurance Fact Sheet at [www.gov.ab.ca/ma](http://www.gov.ab.ca/ma).

\* Concerned individuals should also be aware warranty claims respecting untreated pine shakes, insurance claims or any other claims are subject to a legal limitation period. A limitation period imposes a deadline for bringing a claim. Legal advice should be sought concerning any possible limitation period.

\* It is wise practice to have all roofs using wood shakes or shingles, including those made of untreated pine shakes, inspected by a qualified person at least annually.

\* If black spots or other indications of fungus appear on an untreated pine shake roof, a qualified person should inspect the roof promptly. As with other wood on or in a building, if shakes become infested with fungus, this could lead to safety and health issues.

\* In any case of doubt, one should obtain the opinion of a qualified person who can identify fungal infestation and offer advice on remedial action. Copies of this Bulletin and a Fact Sheet on pine shakes can be obtained from the Alberta Municipal Affairs Website or phone 427-8862.

## Hiring A Roofing Contractor

## Step 1 - Get Recommendations

- \* When looking for a contractor be sure to ask friends, family members and neighbours for recommendations. Ask about the quality of the work and whether it was completed on time and at the agreed price.

- \* Make sure the contractor provides a written contract and doesn't ask for payment in cash "under the table."

- \* Call the Alberta Home Builders' Association at (780) 424-5890, toll free at 1-800-661-3348 or the Alberta Roofing Contractor's Association at 1-800-382-8515 for a list of professionals.

#### Step 2 - Get and Check References

- \* Ask contractors for a list of customer references - people who can verify the contractor's past performance. Ask the homeowners the same questions as you did when gathering recommendations. Would the homeowner hire the contractor for future work?

- \* Use proven or reputable companies. Any warranty is only as good as the company that offers it.

- \* If a contractor is unable or unwilling to provide references, don't hire them.

- \* Phone the Better Business Bureau. It keeps a record of complaints against member contractors working in the area.

#### Step 3 - Asking Questions

If you are getting your roof repaired or replaced there are several questions you should ask.

- \* If you want cedar shakes to be installed ask what type of shakes (split and resawn or tapersawn) will be used. The two different types of shakes produce different looks and there are also different thicknesses and qualities.

- \* What mill produces the shakes and will they be graded and tagged to meet CSA standards? All shakes to be used as roofing must be graded and tagged as meeting CSA standards.

- \* Is the mill inspected by an authorized third-party agency?

- \* What product warranty is available from the mill and is the roofing contractor authorized to offer it? Some warranties are only valid if an approved roofing installer is used.

- \* Make sure the new product is installed according to the current Alberta Building Code and manufacturer's specifications.

- \* If areas of the roof deck are rotten, will there be an extra charge to repair it and if so, how much?

- \* Will the existing flashings, attic vents, gooseneck vents or plumbing vent collars be reused or replaced? The Cedar Shake and Shingle Bureau recommends metal valley flashing be replaced and not reused.

- \* Will the contractor be providing additional oversight or final inspection in writing? Will the company be actively involved in checking the job done by its own workers?

- \* How large will the crew be? What is their experience and what training have they received?

- \* How will the existing shakes be disposed of - truck, trailer or bin?

- \* What driveway access will be required and for how long?

#### Step 4 - Get Protection from Risks

- \* Professional contractors carry liability insurance and Workers Compensation Board (WCB) coverage. They comply with municipal building permit and licensing rules. This protects you. Without this protection, you could be liable for any injuries or damages that result from your roofing work.

- \* Make sure you get proof of protection from these risks. Ask the

contractor for insurance and WCB certificates.

\* Hire a professional contractor and get value for your money. Don't be taken in by promises of low price by someone who's cutting corners.

\* Avoid contractors who offer a low price, provide nothing in writing and ask for payment in cash, without a receipt.

#### Step 5 - Get It in Writing

\* Professional roofing contractors always provide customers with a clear, written contract.

\* Always get a written contract that lays out the essentials, including, but not limited to, what it will cost and how payments will be made. Never agree to anything before you have it in writing.

\* A contract is important. Without one, there is little you can do if the work is of poor quality or incomplete; you risk being charged far more than you expected; and it's unlikely you will get any warranty or after-sales service.

\* Before final payment, insist that the contractor meet you at the job site to do a final inspection to make sure that all finishing work and other details have been completed and that the job site has been cleaned up.

\* Protect yourself from liens. If a contractor does not pay his suppliers and subcontractors, they can place liens on your property. A lien is a notice that someone is claiming a right to be paid out of the value of a particular piece of property. You can find out if a lien has been registered on your property by checking your certificate of title at a registry agent. You can protect yourself from a lien by using the provisions outlined in the Builder's Lien Act.

\* Be sure to obtain all warranty cards or written guarantees before final payment is made and make sure you obtain a phone number and address for any follow-up that may be required.

• **Untreated pine shakes observed. Damage evident. The cost of repairs/replacing the roof may significantly affect your evaluation of the property. Specialist evaluation recommended**







Damaged areas

## Chimney

### 1. Chimney Comments

fair	review often	repair	not visible	safety
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• Limited review, chimney was viewed from the ground only. Our chimney review is limited to visible accessible components only. If further review is desired, we suggest review by a qualified professional prior to close.

## Exterior

**General Comments:** It is important to maintain a property, including painting or sealing walkways, decks, and other hard surfaces, and it is particularly important to keep the house walls sealed, which provide the only barrier against deterioration. Unsealed cracks around windows, doors, and thresholds can permit moisture intrusion, which is the principle cause of the deterioration of any surface. Unfortunately, the evidence of such intrusion may only be obvious when it is raining. We have discovered leaking windows while it was raining that may not have been apparent otherwise. Regardless, there are many styles of windows but only three basic types, single, dual and triple glazed. Dual and triple glazed windows are superior, because they provide a thermal as well as an acoustical barrier. However, the hermetic seals on these windows can fail at any time, and cause condensation to form between the panes. Unfortunately, this is not always apparent, which is why we disclaim an evaluation of hermetic seals. Nevertheless, in accordance with industry standards, we test a representative number of unobstructed windows, and ensure that at least one window in every bedroom is operable and facilitates an emergency exit. We do not evaluate window screens, because many people choose to remove them for aesthetic reasons. Also, they are easily damaged and can be removed after our inspection. Therefore, we choose to disclaim them.

**Grading and drainage** are probably the most significant aspects of a property, simply because of the direct and indirect damage that moisture can have on structures. More damage has probably resulted from moisture and expansive soils than from most natural disasters. Also, there should be gutters and downspouts with splash blocks that discharge away from the building. We have discovered evidence of moisture intrusion inside structures when it was raining that would not have been apparent otherwise. In addition, we recommend that downspouts do not terminate over paved areas such as walks or driveways, as they can contribute to icy slip and fall hazards in winter. Water can be destructive and foster conditions that are deleterious to health. For this reason, the ideal property will have soils that slope away from the residence and the interior floors will be several inches higher than the exterior grade. A drop of 10 to 15 cm over 1.5 meters from the wall of your home may be required to adequately direct water away from the home. Also, the residence will have roof gutters and downspouts that discharge into area drains with catch basins that carry water away to hard surfaces. However, we cannot guarantee the condition of any subterranean drainage system, but if a property does not meet this ideal, or if any portion of the interior floor is below the exterior grade, we cannot endorse it and recommend that you consult with a grading and drainage

contractor, even though there may not be any evidence of moisture intrusion. The sellers or occupants will obviously have a more intimate knowledge of the site than we could possibly hope to have during our limited visit, however we have confirmed moisture intrusion in residences when it was raining that would not have been apparent otherwise. Also, in conjunction with the cellulose material found in most modern homes, moisture can facilitate the growth of biological organisms that can compromise building materials and produce mold-like substances that can have an adverse affect on health. Minor settlement or "hairline" cracks in drives, walks or even foundations are normal to properties of any age. They should, however, be monitored for expansion and sealed as necessary. Note that any siding, but especially composition or hardboard siding must be closely monitored. A classic example is the older style Louisiana Pacific siding, where the failure and deterioration provided grounds for a class action lawsuit. Even modern composition siding and, especially, trim, is particularly vulnerable to moisture damage. All seams must remain sealed and paint must be applied periodically (especially the lower courses at ground level). It is imperative that continued moisture be kept from it, especially from sprinklers, rain splash back or wet grass. Swelling and deterioration may otherwise result.

Vegetation too close to the home can contribute to damage through root damage to the foundation, branches abrading the roof and siding, and leaves providing a pathway for moisture and insects into the home. Although rails are not required around drop-offs less than 30", consider your own personal needs and those of your family and guests. By today's standards, spindles at decks and steps should be spaced no more than 4" apart for the safety of children. Open window wells should have either grates or, preferably, a weatherproof shield installed over them. This will keep rain and snow from building up inside the well and possibly leaking into the home, as well as minimizing your liability from children and nonresident falling inside them. An egress ladder should also be installed within the well, especially at below grade bedrooms. Backfill When your home was constructed, the basement was dug from undisturbed soil. After the foundation was completed, soil was pushed back into the gap between your foundation walls and the undisturbed soil. This soil is not as compact as the rest of the undisturbed soil surrounding the foundation. This less compact soil is more permeable, and allows water to infiltrate into the ground beside the foundation. Permeable soil next to the foundation can increase the chances of infiltration flooding in the home, and can increase flows into the weeping tile. If the weeping tile is connected to the municipal sewer system, excess water can increase overland flooding and sewer backup risk in the neighborhood. If the weeping tile has been disconnected from the municipal system and is drained into a sump pit, the sump pump will have to run longer to pump excess water flows from the weeping tile. As part of the lot grading improvements, a compact soil should be used to fill in any depressed areas directly beside the foundation wall. A compact soil, such as clay, should also be used to "cap" the backfill area, and should be properly sloped to keep water away from the home.

**FLOODING - PROTECT YOUR PROPERTY.** Clear leaves and other debris from your eavestrough to prevent rainwater from running down the sides of your house, where it could accumulate and seep into your basement. Downspouts should lead away from your house. Make sure your downspout

extensions are at least 1.5 meters (five feet) away from your house. If your front and back yards drain toward the street, put the down spout extensions in the front yard only. If you take the extensions off to mow the lawn, remember to put them on again. Don't connect eavestrough extensions or downspouts to other pipes. Don't connect extensions from your eavestrough to the sanitary sewer line or weeping tile because excess water could overload pipes and cause flooding in your basement. Don't connect eavestroughs that drain directly onto a street, lane or sidewalk. This kind of connection can wash out gravel lanes and increase the chances of flooding in your community. Eavestrough extensions should drain away from your house and onto your grass, so the water soaks into the ground. Don't over water lawns. Over watering your lawn and flowerbed next to your house can cause seepage into the basement. A leak in an underground sprinkler system can do the same thing. If you have an underground system, check for leaks and drain it every fall before the ground freezes. Improve yard drainage. To prevent water from collecting beside your house and seeping into the basement, make sure yard and flower gardens drain away from your house and onto a grassed area in the front or back yard - not toward a neighbor's yard. Check around outside walls, under stairs and decks where soil settles, and fill in any hollow or sunken areas. Cover your window wells with a plastic protector to prevent rainfall from collecting. During the winter, remove snow from the foundation of your home. Keep drainage gutters clear of debris. Some yards have concrete drainage gutters in the backyard. The concrete drainage gutter at the back of your property should be clear of debris. This gutter is designed to drain water from the backyards on your block. Homeowners are responsible for keeping these gutters clean. Maintain your property levels height. When it rains, streets, dry ponds, wet ponds, rivers and streams hold excess water. Lowering the level of your property for a walkout basement, garage or any other reason, creates a pathway for water to enter your home. Park your vehicles on high ground. If you have low spots on the street where water collects, park your vehicles on higher ground. Report plugged storm drains. If you see a plugged storm drain, call 3-1-1. They will clear the debris from the drain to allow proper drainage.

**Prevent water contamination.** The City of Calgary is committed to providing safe reliable drinking water however, safeguarding drinking water is everyone's responsibility. To protect drinking water from contamination, Water Services runs the cross connection control program. **How can water be contaminated?** Under normal conditions, water is delivered from The City's water supply to citizens for use in their home. Water contamination can happen when backflow occurs due to an unprotected cross connection within a home's plumbing. **What is backflow?** Backflow takes place when water flow reverses due to back siphonage or back pressure. **Back-siphonage** may be caused by reduction of supply pressure or when water supply is interrupted. Here are a few examples: When a water main is shut off for repairs, when internal plumbing is shut off for on-site repairs, when there is high water demand (i.e., fire fighting, high home water use), when there are different elevations (i.e., elevated piping, hilly landscape). **Back-pressure** can arise from any water system that operates at a higher pressure than the supply pressure such as booster pumps, high-rise buildings, thermal expansion, or high pressure boilers. **What is a cross connection?** A cross connection is any temporary, permanent or potential water connection between a potable (drinking) water system and

any source containing non-potable water or any other substance from which backflow may occur. Improper plumbing and/or cross connections can contaminate the public drinking water supply. City Council amended the water bylaws to control cross connections through the installation of backflow protection, and mandated the annual testing and maintenance of cross connection control devices. **Responsibilities for residential customers and homeowners.** Homeowners must ensure no cross connections exist on their property that could contaminate their water supply. There are several ways to reduce the risk of contamination:

**Hoses.** Never place the end of a hose where contaminants could siphon back into your drinking water. Some examples include: a bath tub or spa, wading pool, fish tank, water conditioner, laundry sink and pail or floor drain. Additionally, leave at least a one-inch gap between the end of your hose and any source of contamination.

**Fertilizer.** When using a fertilizer or pesticide sprayer with your garden hose, attach a Hose Connection Vacuum Breaker (HCVB) on your home's outdoor taps. HCVBs are available at retail plumbing suppliers and building material suppliers.

**Irrigation.** If your home has an in-ground irrigation, you must protect your home's drinking water by installing a minimum of a Double Check Valve Assembly (DCVA) on the water supply to your irrigation system. DCVAs are available at retail irrigation equipment suppliers, plumbing suppliers and building material suppliers. We do not evaluate or test any sprinkler systems. Ensure that there are no leaks and that it sprays away from the foundation at all times. In winter ensure that all the water from the lines are removed/drained

**Foundation Cracks.** Shrinkage cracks, which are not normally a structural defect in a building, may nonetheless need to be sealed against water entry. Common repair methods include chipping out the crack and applying a masonry patching compound to the surface, use of epoxies, or other sealants. Polyurethane, non-sag elastomeric sealant for repairing cracks in concrete is recommended. Cracks in poured concrete walls that are larger than 1/8", cracks which are increasing in size, or cracks which are otherwise indicative of foundation movement should be evaluated by a professional. Best practice in stopping water entry at any foundation crack (shrinkage, settlement, etc) is to find and correct the root cause

### 1. Gutter Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

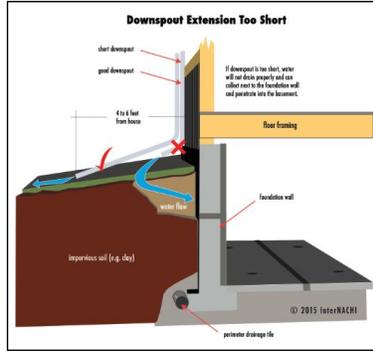
Material: Metal

- Downspout to underground drainage system can clog if not maintained. You may wish to consider installing a conventional above grade downspout extension to lead water 4-6 ft away from **foundation** or have the current system serviced regularly. Defects may lead to basement moisture intrusion

- Downspout discharges water at foundation. Recommend installation of extension to ensure proper drainage away from foundation to prevent seepage.



Roof downspout outlet at back door!



### 2. Driveway Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Concrete

### 3. Walkway Conditions

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Concrete

### 4. Exterior Wall Cladding Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Stone • Vinyl Siding

- Brick veneer detail image for reference
- Loose stones



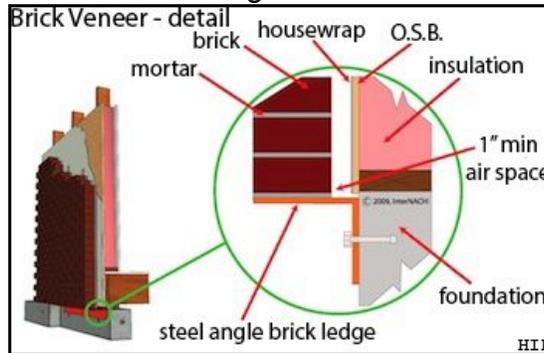
Loose



Damaged by barbecue



Deck leaning towards house



### 5. Soffit

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 6. Vent

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Observations:

- Ventilation louvres are damaged. You may wish to have it replaced/repared to prevent moisture intrusion



Repair vent louvre

### 7. Window/Frame Conditions

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Metal Capped • Vinyl Frame

- Thermopane windows observed in the home. The inspector is unable to determine if all double glazed insulated windows in this property are completely intact and without compromised seals. Conditions indicating a broken seal are not always visible or present and may not be apparent or visible at the time of inspection. Changing conditions such as temperature, humidity, and lighting limit the ability of the inspector to visually review these windows for broken seals. For more complete information on the condition of all double glazed windows, consult the seller prior to closing.
- Suggest caulking around doors and windows as necessary to prevent moisture intrusion/internal damage.
- Wood framing pulling away. Repair and seal as required to prevent moisture damage



### 8. Exterior Door Conditions

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Ensure all exterior door seals are in place and serviceable during winter to prevent cold air draft. Exterior door assembly is not providing a seal against exterior elements. Exterior doors can warp to some degree due to temperature differential between inside and outside surfaces. Doors between the garage space and the outdoors are not required to be weather-stripped. The door between the living area of the home and garage requires appropriate sealing.

### 9. Door Bell Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Front

- Door bell has been removed

### 10. Electric Meter Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 11. Gas Meter Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 12. Electrical Conditions

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

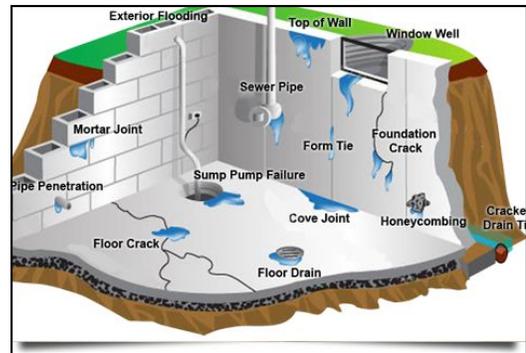
- **GFCI** in place and operational

### 13. Foundation Conditions

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Concrete foundation

- Always monitor home for foundation cracks and openings. Seal to prevent water intrusion
- Seal foundation cracks to prevent moisture intrusion



14. Deck Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Wood

- No ledger board flashing noted. Will deteriorate. Service recommended
- Ledger Board Fasteners: It is very important that you use the correct size and type of fasteners to install your ledger board. Your deck will depend on the load carrying capacity of these screws or bolts to support hundreds of pounds and prevent the deck from ripping away from the house. The most common method is to install 1/2" lag bolts with washers or carriage bolts with washers. You will usually need the length of the bolt to be at least 4"-6" to penetrate through the 2x ledger board, the house sheathing and into the solid house rim. Never counter sink bolts. This will significantly weaken the ledger board. In a ledger board application, a 1/2" x 4" lag bolt was tested to provide 180 lbs support of allowable shear load per screw. Be sure to know what you are connecting to. Standard bolt patterns are based on a solid connection to a solid-sawn and fully supported band joist in the home. Lag screws that hit wall plates or studs may not be comparable. The fasteners must be compatible with pressure treated lumber to prevent corrosion. Typically you will need to install your bolts alternating high and low 2" from the top and bottom of the ledger board. As a rule of thumb bolts can be spaced 16" on center for supporting joist span up to 12' in length. Longer joists will require tighter bolting patterns. Confirm with local requirements
- Deck surface not all inspected due to snow cover

• There are components of the wood deck that are structurally unsound. Especially the staircase. We can elaborate on this issue, but the deck should be evaluated by a specialist and serviced accordingly. When a deck is attached to a building, the part of the deck that gets supported by the earth needs to have proper frost footings. The most common deck footing is basically a big chunk of concrete poured in to a hole in the earth. The goal is to have this chunk of concrete go deep enough in to the ground so that the bottom rests on soils that never freeze, which should prevent the soils from pushing the footing up. When deck footings aren't poured deep enough, decks can heave. Sandy, well drained soils aren't particular susceptible to frost heave, while soils with higher clay content are prone to frost heave. This is why it's so important for deck footings to extend down below the frost line.



Leaning



Pulling away





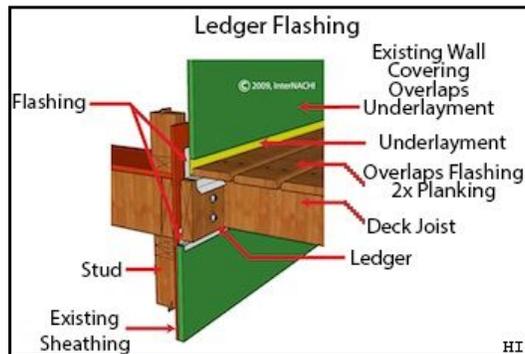
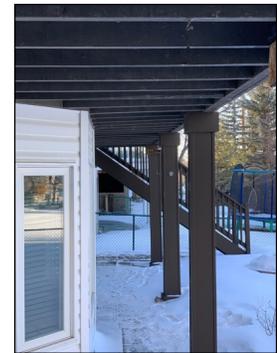
Areas of wood rot



Not visible



Waviness - frost heaving?



15. Balcony Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

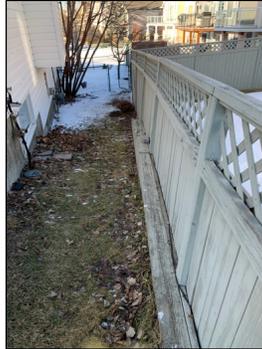
• This is a limited review due to snow cover.

16. Fence Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Chain Link • Wood

- Wood deterioration observed. Suggest repairs/replacement as needed.
- Fence leaning in areas.



Leaning fence

## 17. Lot Grade and Drainage Conditions

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Lot grading, backfilling and swales Information: Lot Grading - If you've ever had a look around newly constructed homes, you might notice that yards are gently graded away from houses. When a yard is graded in this manner, it helps keep water away from the home and foundation, and helps keep the basement dry. Most municipal governments in Canada have bylaws that require lot grading that directs water away from the home, as a properly graded yard can substantially reduce basement flood and moisture problems. Over time, however, yards can lose this slope for a number of reasons. For example, landscaping work can impact lot grading, and over time, soil may settle and result in lot grading that directs water toward the home and foundation. New decks, additions to homes or alterations to your neighbour's properties can also affect lot grading around your home. When regrading lots to direct water flows away from the home, the following points should be considered:

- A drop of 10 to 15 cm over 1.5 metres from the wall of your home may be required to adequately direct water away from the home.
- Lot grading should direct water to an acceptable drainage outlet that can direct flows to municipal conveyance systems. Consult your local government to ensure that water from your lot is directed to the right place.
- Ensure that lot grading does not direct water in such a way as to create ice build-up on neighbouring properties or sidewalks.
- Ensure that water flows from your lot do not negatively affect neighbouring properties.

Swales - Swales are grassy depressions, like a shallow ditch, that help direct the flow of water away from homes. Swales generally direct water toward drainage infrastructure, including roadways or storm sewer catch basins. The same factors that affect lot grading can affect swales. For example, landscaping and the settling of soil can both damage swales. Sheds and fences should not be placed in a manner that blocks drainage paths or catch basins. Consult your municipality to see if a drainage plan for your subdivision exists, and ensure you maintain the intended drainage plan if you are going to alter your yard by building fences or sheds.

**Backfill** - When your home was constructed, the basement was dug from undisturbed soil. After the foundation was completed, soil was pushed back into the gap between your foundation walls and the undisturbed soil. This soil is not as compact as the rest of the undisturbed soil surrounding the foundation. This less compact soil is more permeable, and allows water to infiltrate into the ground beside the foundation. Permeable soil next to the foundation can increase the chances of infiltration flooding in the home, and can increase flows into the weeping tile. If the weeping tile is connected to the municipal sewer system, excess water can increase overland flooding and sewer backup risk in the neighbourhood. If the weeping tile has been disconnected from the municipal system and is drained into a sump-pit, the sump-pump will have to run longer to pump excess water flows from the weeping tile. As part of the lot grading improvements, a compact soil should be used to fill in any depressed areas directly beside the foundation wall. A compact soil, such as clay, should also be used to "cap" the backfill area, and should be properly sloped to keep water away from the home.

- Adding dirt backfill to any low lying areas located around the foundation is recommended to ensure proper drainage away from the foundation at all times.
- Ensure all boxed in areas have drains to ensure positive drainage away from foundation

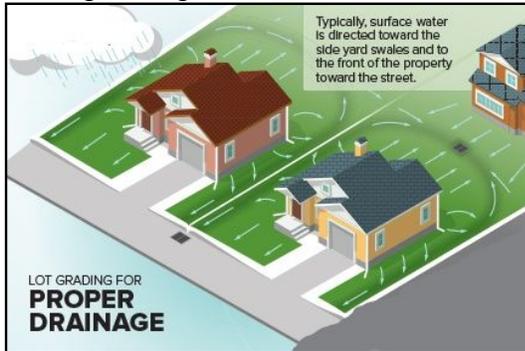
• Grading and drainage is either negative or neutral adjacent to the residence, and moisture intrusion will remain a possibility. The soil or the hard surfaces should slope away from the residence to a distance of at least six feet, to keep moisture away from the footings.



Negative grade



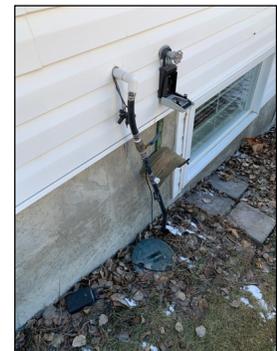
Fill in low grade areas



18. Landscaping Observation

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- We do not evaluate or test any sprinkler systems. Ensure that there are no leaks and that it sprays away from the foundation at all times. In winter ensure that all the water from the lines are removed/drained
- A tree that is adjacent to the foundation should be monitored for any growth that might affect the foundation.



Recommend removing to prevent structure damage

19. General Exterior Comments

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- An effective water management program is required for all homes. This includes maintenance of all wooden components, caulking of all openings and ongoing vigilance of water handling systems, roof and flashing. Buyer is advised that while there may not be evidence of water intrusion into structure at time of inspection, NO STATEMENT referring to future performance can be made due to changing weather and structure conditions.

Safety

Tips

**Building a Wood Deck**

 Alberta  
Government
**Alberta's Safety System**

Alberta Municipal Affairs works in partnership with the Safety Codes Council, municipalities, corporations, agencies, and other organizations, to deliver effective community-focused public safety programs and services to Albertans.

**Do you need a permit?**

Yes, in most cases building a deck will require a permit. As the home owner, you are responsible for getting all necessary permit(s). Check with your municipality to find out what permits you need or contact Municipal Affairs to find the permit provider in your area. Make sure you get your permit(s) before starting your project.

**Safety measures**

If handrails and/or guardrails are required by the Alberta Building Code, doors opening onto a residential wood deck must be mechanically secured to prevent access until handrails and guards are installed.

**Required Plans**

Before starting any construction, you must submit plans with your building permit application submitted to your municipality or permit provider. The plans may include any or all of the following:

- Site plan
- Cross-section
- Deck floor plan

**Site plan (required information)**

- Show north with an arrow and indicate the size of the property using proper dimensions.
- Indicate distances from the deck to property lines and to any existing buildings on site.

**Importance of permits**

The *Safety Codes Act* requires that permits in Alberta be obtained prior to commencing work on any buildings covered by the Alberta Building and Fire Codes, the Canadian Electrical Code, the Gas Code, or the National Plumbing Code.

Permits are part of a process to access compliance to a minimum standard of construction safety for the benefit of all Albertans. If construction projects are undertaken without required permits, the owner may be subject to penalties and extra costs incurred to bring a project into compliance.

As the property owner, you are responsible to obtain all necessary permits. A contractor can look after this on your behalf; however, you should specify in writing, who will get the required permits. Some jurisdictions may require a letter of authorization before a contractor can apply for permit(s) on your behalf.

Safety

Tips

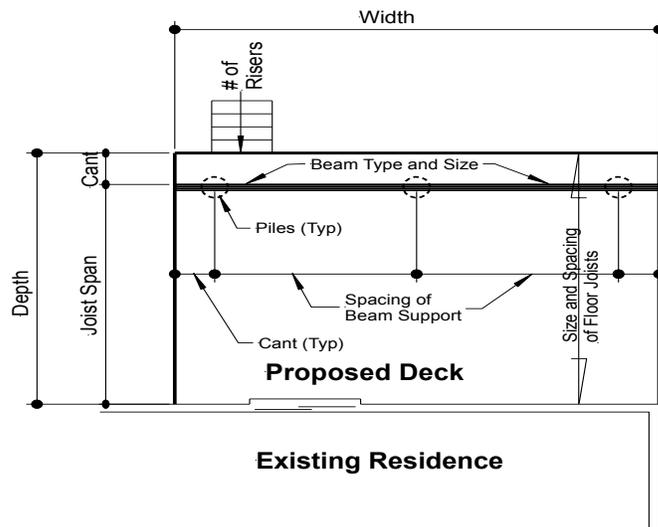
## Building a Wood Deck

Alberta  
Government

### Deck floor plan (required information)

- Indicate deck size (length, width and height) using proper dimensions.
- Provide deck layout, indicating the joist direction on the plan as well as size, spacing of joists and span between joist supports.
- Show size, location and height of columns.
- Specify beam size.
- Show the type of foundation and depth below grade.
- Describe the location, size and depth of piles (if any).
- Provide details of the stairs (if any). For example, the width, height, rise, run, handrails, etc.

### Deck floor plan illustration



Open sides of a deck must be protected by a guardrail on each side not protected by a wall:

- for every length where the elevation is more than 600 mm (24") between the deck and ground; or
- if the adjacent ground, within 1.2 m (48") of the deck, has a severe slope.

### Benefits of getting a permit

When you get a permit, certified safety codes officers (inspectors) will:

- give you expert advice,
- review your plans to find any potential problems,
- inspect your project, and
- make sure your project meets the Alberta Building Code.

Making changes at the planning stage can save you money, rather than making costly corrections after construction. Certified safety codes officers will give you an inspection report(s) and follow-up on deficiencies to make sure your project is safe and in compliance.

### Where do you get a permit?

Permits are available through municipalities that administer the *Safety Codes Act* and through agencies that provide inspection services on behalf of municipalities or the province. If you don't know whether your municipality issues permits, contact the Alberta Safety Codes Authority (ASCA) at 1-888-413-0099 or visit [safetycodes.ab.ca/ASCA](http://safetycodes.ab.ca/ASCA).

## Safety

## Tips

## Building a Wood Deck



Openings in guards in all non-industrial buildings shall be small enough to not permit the passage of a 100 mm (4") diameter sphere.

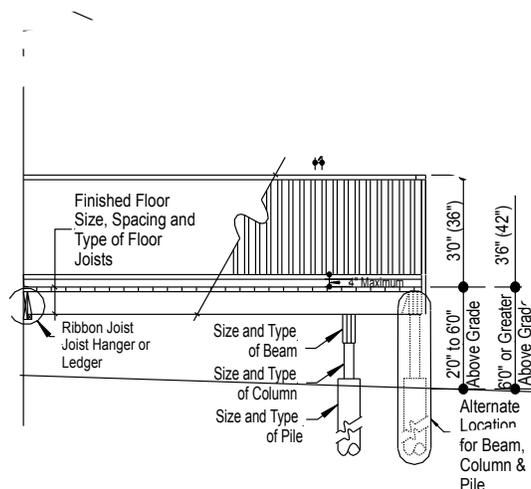
Guardrails must be designed so no part, including ornamental fixtures, will allow for climbing.

Guardrails must be at least 1.07m (42") high, from the deck surface to the top of the guardrail. Guardrails serving a single home can be 0.9 m (3') high if the deck surface is not more than 1.8 m (6') above the ground.

### Surface foundations

If your deck is built on a foundation that is supported on a surface other than rock or coarse-grained soil with good drainage, access to the foundation for re-leveling shall be provided:

- by passageways with a clear height under the deck of at least 600 mm (24") and a width of at least 600 mm (24"); or
- by installing the deck surface in a way that allows easy removal.



### Applying for a building permit

When applying for a building permit, you must submit the following information to your local authority:

- details of the project or occupancy to be covered by the permit.
- details of the land on which the project will be located, including a description that will easily identify and locate the building lot.
- plans, specifications and other documents showing, in detail, the proposed occupancy of all parts of the building. state the value of the proposed project.
- state the names, addresses and phone numbers of the project owner, designer and contractor.

### Hire qualified tradespeople

Specific trades such as electricians, plumbers and gasfitters must be certified to work in Alberta. To find out if the tradespeople you are hiring need to be certified in Alberta or to verify an individual's status, you may contact *The Apprenticeship and Industry Training* office by calling 310-0000.

Safety

Tips

## Building a Wood Deck



### Clearances to Overhead Power Lines

Wood decks beneath overhead power lines must maintain a minimum vertical clearance of 3.5 m (11' 6") Consult with your Electrical Utility provider regarding distances between metering and deck surfaces.

### Subsurface foundation requirements

- The foundation system must be at least 1.2 m (4') below grade and extend at least 150 mm (6") above grade.
- Footings are not required under piles if the safe load-bearing capacity of the soil is not exceeded. Your safety codes officer may require additional verification.

**NOTE:** Concrete pile design is not included in the scope of the Alberta Building Code and may require the seal and signature of a Professional Engineer.

If you want to use a concrete pile, the municipality or permit provider in your area will decide if a registered architectural or engineering professional (which include registered technologists) is needed to complete the structural design.

*These brochures may be updated periodically. They have no legal status and cannot be used as an official interpretation of the various bylaws, codes and regulations currently in effect.*

#### More information:

##### Alberta Municipal Affairs

Community & Technical Support  
16<sup>th</sup> Floor, Commerce Place  
10155 - 102 Street  
Edmonton, Alberta T5J 4L4

 Toll-free: 1-866-421-6929  
 [safety.services@gov.ab.ca](mailto:safety.services@gov.ab.ca)  
 [municipalaffairs.gov.ab.ca](http://municipalaffairs.gov.ab.ca)

##### Safety Codes Council

Suite 500  
10405 Jasper Avenue  
Edmonton, Alberta T5J 3N4

 Toll-free within Alberta:  
1-888-413-0099  
1-888-424-5134  
 [webmaster@safetycodes.ab.ca](mailto:webmaster@safetycodes.ab.ca)  
 [safetycodes.ab.ca](http://safetycodes.ab.ca)

##### Alberta Safety Codes Authority (ASCA)

 Toll-free within Alberta:  
1-888-413-0099  
 [askasca@safetycodes.ab.ca](mailto:askasca@safetycodes.ab.ca)

#### Call (or click) before you dig!

**Alberta One Call** will locate utility lines on your property. Call or click before you start any project that involves digging in your yard. Alberta One Call will locate gas, water, electricity, drainage, telephone and cable TV lines. Allow at least two full working days for Alberta One Call to locate your utility lines.

## Garage

The wall between a house and attached garage is required to be constructed as an airtight barrier to help prevent exhaust fumes from getting into the house. Any time you put a hole through the wall for any purpose, those holes need to be sealed. The door to the garage is required to be provided with an automatic closer and weather-stripping to contribute to the airtight barrier. If damaged, both the automatic closer and weather-stripping need to be maintained and replaced to keep this barrier effective.

It is not uncommon for moisture to penetrate garages, because their slabs are on-grade. Evidence of this is typically apparent in the form of efflorescence, or salt crystal formations, that result when moisture penetrates the concrete slab or sidewalls. Hairline cracks in the slab are very common due to the curing process. In addition, and inasmuch as garage door openings are not standard, you may wish to measure the opening to ensure that there is sufficient clearance to accommodate your vehicles. Door openers are tested and defects will be reported where applicable

### 1. Garage Floor Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Concrete

- Garage concrete floor is cracked. Acceptable Performance Condition: Cracks resulting from normal shrinkage are acceptable. Concrete floors naturally dehydrate during the curing process often resulting in surface cracks. Cracks that exceed 1/8 inch (3mm) are considered excessive. Vertical displacement at a crack exceeding 1/4 inch (6 mm) is considered excessive.



Some slab movement noted



### 2. Garage Door Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Garage door frame seals needs repair



### 3. Fire Door Conditions

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

• The house entry door is not self-closing and is required to be, to maintain the necessary firewall separation between a garage and living quarters, and will need to be serviced.

Doors between an attached or built-in garage and a dwelling unit shall be tight fitting and weather-stripped to provide an effective barrier against the passage of gas and exhaust fumes and shall be fitted with a self-closing device.



### 4. Fire separation condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

• The firewall separating the garage from the residence appears to be inadequate.

Garage fire wall / separation wall - materials used on the garage side of walls and ceiling common to the house must meet certain requirements in order to slow the spread of fire. IRC (International Building Code) specifies that single and 2-family building must have a one hour rated surface, half an hour if an automatic sprinkler system has been installed.

In order to achieve this garage wall fire rating, the house - garage common wall needs to be sheathed with at least 1/2" thick drywall, and the ceiling surface requires minimum 5/8" thick, type X gypsum board.

All drywall seams must be taped / finished with joint compound and some jurisdictions might require fire rated joint tape for this purpose.

The garage fire wall should have no missing / damaged drywall sections, any penetration must be sealed (fire rated caulking would be perfect for small gaps around the pipes, air ducts, door frames, etc). If the wall is made out of brick, cinder block, stone, solid concrete, or any other non-flammable material, you'd just have to worry about penetrations.



Ensure duct is connected



Firewall separation compromised



Open seam



Open seam



### 5. Garage Wall Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Drywall • Paneled

- Efflorescence observed; this is a mineral deposit left behind from exterior water infiltration.
- Concrete cracks noted. Seal from outside. Monitor for active movement
- Foundation walls shows signs of movement.



Crack



Crack



### Attic

We recommend that all attic hatches are insulated and that the hatch be sealed shut with weather stripping. This will keep warm moist air from entering the attic, which may cause condensation or even mold. Note that every attic has mold; mold is everywhere. Some attics have some minor visible mold. This is often a result of the building process, when materials get wet during construction. If there is extensive mold, or mold that appears to have grown due to poor maintenance conditions, we will report it to you, the client. If the hatch is sealed shut when we go to inspect the attic, it can only be unsealed by the owner or their representative, as our insurance prohibits us from performing any destructive testing or entry. In accordance with industry and insurance standards, we will not attempt

to enter an attic that has no proper access; less than thirty-six inches of headroom; does not have a standard floor designed for normal walking; walking, in the inspector's opinion, may compromise the ceiling below; is restricted by ducts, or in which the insulation obscures the joists and thereby makes mobility hazardous, in which case we will inspect the attic as best we can from the access point, with no comments or evaluations of areas not readily viewed from the hatch area. Also, we do not disturb or move any portion of it, and it may well obscure water pipes, electrical conduits, junction boxes, exhaust fans, and other components.

1. Methods Used to Inspect

Entering attics that are heavily insulated can cause damage to the insulation and attic framing. Attics with deep insulation cannot be safely inspected due to limited visibility of the framing members upon which the inspector must walk. In such cases, the attic is only partially accessed, thereby limiting the review of the attic area from the hatch area only. Inspectors will not crawl the attic area when they believe it is a danger to them or that they might damage the attic insulation or framing. This is a limited review of the attic area viewed from the hatch only.

2. Framing Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Sheathing Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Insulation Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Loose fill/blown in insulation

- 10-12" of insulation present.

5. Electrical Conditions

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

• Any electrical components in attic were not accessible to inspection, therefore not within scope of this report.

6. Attic Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• No visible defects noted from the hatch.





## Basement

All structures are dependent on the soil beneath them for support, but soils are not uniform. Some that might appear to be firm and solid can liquefy and become unstable during seismic activity. Also, there are soils that can expand to twice their volume with the influx of water and move structures with relative ease, raising and lowering them and fracturing slabs and other hard surfaces. In fact, expansive soils have accounted for more structural damage than most natural disasters. Regardless, foundations are not uniform, and conform to the structural standard of the year in which they were built. In accordance with our standards of practice, we identify foundation types and look for any evidence of structural deficiencies. However, cracks or deteriorated surfaces in foundations are quite common. In fact, it would be rare to find a raised foundation wall that was not cracked or deteriorated in some way, or a slab foundation that did not include some cracks concealed beneath the carpeting and padding. Fortunately, most of these cracks are related to the curing process or to common settling, including some wide ones called cold-joint separations that typically contour the footings, but others can be more structurally significant and reveal the presence of expansive soils that can predicate more or less continual movement. We will certainly alert you to any suspicious cracks if they are clearly visible. However, we are not specialists, and in the absence of any major defects we may not recommend that you consult with a foundation contractor, a structural engineer, or a geologist, but this should not deter you from seeking the opinion of any such expert.

Moisture in basements is a perennial problem, involving a host of interrelated factors, and can be unpredictable, intermittent, or constant. When moisture intrusion or dampness is not self evident, it can be inferred by musty odors, peeling paint or plaster, efflorescence, or salt crystal formations, rust on metal components, and wood rot. However, condensation and humidity can produce similar conditions if the temperature in the basement is not maintained above the dew point. Regardless, we are not mold specialists, and if you or any member of your family are sensitive to allergy's you should schedule a specialist inspection.

Avoiding Basement Flooding. Is Basement Flooding a Common Problem? Basement flooding is unfortunately a common occurrence in many parts of Canada. Basement flooding related insurance claims in Canada are estimated to be in the order of \$140 million per year based on a multi-year average. This represents an average of approximately 30,000 to 40,000 incidents per year, with an average cost of damages per flooding incident between \$3,000 and \$5,000. Many cases of

basement flooding are not reported. But the good news is that many types of basement flooding may be avoided. This publication explains some of the practical steps you can take to avoid basement flooding. **How Serious Is Basement Flooding?** Basement flooding is now being recognized as a potentially serious problem. There are many negative consequences associated with basement flooding, above and beyond the inconvenient mess and disruption of household routine. Recent research cites the following impacts: Chronically wet houses are linked to an increase in respiratory problems. "Frequent occurrences of basement flooding can result in long-term damage to the building and equipment that may not be covered by insurance. "Insurance rates may rise to compensate for repeated basement flooding claims, and/or the minimum deductible may be increased significantly. "Property value may depreciate because the basement is prone to frequent flooding. Before appropriate measures can be taken, it is important to identify the causes of basement flooding. These range from problems originating in the individual dwelling to problems associated with the municipal sewer systems that serve entire communities.

**Why Do Basements Flood?** Water can enter your basement for a number of reasons. Water in your basement is most likely to occur during periods of heavy rainfall, or when snow is melting rapidly during a spring thaw. In these cases, your basement can be wet because of a leak or crack in your homes basement walls, poor lot drainage, failure of the weeping tiles (foundation drains), overflowing eaves troughs or leaking/plugged downspout. Basement flooding may also occur because of a blocked connection between your home and the main sewer in the street, a backup of wastewater in the sewer system (or a combination of wastewater and rainwater from the sanitary or combined sewer system), failure of a sump pump (in some areas) used to pump weeping tile water. Basements are also vulnerable to natural river flooding disasters, but these cannot be addressed by individual homeowners.

**Flooding Basics:** Municipalities attempt to prevent flooding by maintaining the public sewer system. Homeowners with private sewage systems (septic tank and field bed) can appreciate the need for regular maintenance, but unforeseen or accidental problems can occur in any type of system. This is some municipal infrastructure terminology you should know.

**Sanitary Sewer:** A sanitary sewer is a pipe buried beneath the street that is designed to transport wastewater from your home. This consists of water from sanitary fixtures and floor drains inside your house, and in some areas includes groundwater from weeping tiles around the foundation of your home.

**Storm Sewer:** A storm sewer is a pipe buried beneath the street that is designed to carry storm related water runoff. Storm sewers are normally much larger than sanitary sewers because they are designed to carry much larger amounts of flow.

**Sewer Backup:** Extra storm related water (from sources other than wastewater and groundwater) should flow into the storm sewer or soak slowly into the ground without entering the sanitary sewer. If excess storm water does enter the sanitary sewer system, it can overload this kind of system. When the sewers are overloaded, the water level in the system rises above normal design levels, and this condition is referred to as surcharge. Basement flooding can occur if the home has

sanitary fixtures or floor drains below the surcharge level. Practical Measures to Avoid Basement Flooding: Basement flooding problems are best diagnosed by working your way down from the eaves troughs and downspouts, to the lot and foundation drainage, and then to the plumbing system - both inside your home and beyond its connection to the municipal sewer system. Eaves troughs and Downspouts: Water pours off your eaves troughs into downspouts. If the downspouts are dumping the water right beside your foundation, it drains directly to the weeping tile and can easily overload your homes drainage. Make sure downspouts extend at least 1.8 meters (6 feet) from your basement wall. Also, be sure the water does not drain toward your neighbours basement walls. It should drain away from your house toward the street, rear yard, or back lane. If your downspouts are connected to your homes sewer system, or weeping tile, disconnect them. Clean debris from eaves troughs regularly. If they overflow even when clean, replace them with larger size eaves troughs and downspouts.

#### Lot Grading:

If the land around your home slopes in toward the foundation, rainwater heads right for the weeping tile around the basement and can overload your foundation drainage system. The land around many homes settles over time, and then slopes in toward the foundation. If your lot slopes inward, you'll want to fill in and grade the lot so that, for at least 1.8 meters (6 feet) out from around the foundation, the land slopes away from your house. Build up the ground around your house so that water drains away from your basement walls. Also, examine sidewalks, patios, decks and driveways. These can settle over time and cause water to drain back towards your basement walls. Extend downspouts so that water flows away from your house and does not collect next to the basement walls and windows. Proper drainage helps to reduce the amount of water flowing to your homes sewer system and to the main sewer system, and lessen the risk of sewer backup. Reduce water seepage into your home through basement windows and cracks in your basement walls. Keep the moisture content of the soil around and under your house stable to reduce the chances of cracking and shifting. If water collects next to your basement, it can make its way to the footings that support the basement walls.

The increased moisture may cause the footings to heave or settle. Extend the life of your sump pump by reducing the amount of work it has to do. Be sure that any drainage improvements you make do not cause water to flow onto your neighbours property.

Flood proofing Devices: If your home drainage system or the neighbourhood's drainage system overloads, you may still be able to prevent rain water and sewage from backing up into your basement by installing one or more flood proofing devices, such as sump pumps or back flow valves. Each installation is unique and some devices (back flow valves) may require a plumbing permit. Check with your municipal office or a qualified plumber before you proceed with any installation. Prevent sewage and storm water from backing up into basements. When water on flooded streets drains into sanitary sewer manholes, sewer pipes may become overloaded and cause flooding in basements. You can stop sewage from entering your basement by capping or installing a back flow prevention device on your basement floor drain. Back flow prevention devices can also be installed in basement showers, toilets and sinks. Call a qualified plumber for more information. A sump pit

drainage system includes a sump pit, a sump pump and a discharge pipe. Clean the pit each year after freeze up. Weeping tile drainage may carry small amounts of soil, sand and debris into the pit from around your basement foundation. Some water may remain in the pit and cause a musty smell if it sits for a long time. If so, you can flush the pit by adding fresh water until the pump removes the stale water.

**Sump Pump:** Check and test your pump each spring before the rainy season begins, and before you leave your house for a long time. Pour water into the pit to trigger the pump to operate. Remove and thoroughly clean the pump at least once a year. Disconnect the pump from the power source before you handle or clean it. Check the pit every so often to ensure it is free of debris. Most pumps have a screen that covers the water intake. You must keep this screen clean.

**Backup Sump Pump:** Severe storms are often accompanied by power blackouts. A battery powered backup sump pump may be a prudent investment. Most pumps are made to fit in beside the main sump pump and also have an audible alarm that warns the main pump has failed so that you can attend to its repair or replacement. There are also water powered backup sump pumps available that run by water flowing through the pump impeller.

**Sump Pump Discharge Pipe:** Check the place where the discharge pipe leaves the house. If the pipe is discharging right against the basement wall, the water will drain down into the weeping tiles and continue to recycle through the system. Check the discharge point regularly to make sure that nothing is blocking the flow. If your pump runs frequently in the winter, and the resulting ice is causing hazardous conditions on the lawn and sidewalks, call your municipal office.

**Backwater Valve:** A backwater valve is a device that prevents sewage in an overloaded main sewer line from backing up into your basement. The valve automatically closes if sewage backs up from the main sewer. A properly installed backwater valve must be placed so that sewage backup will be stopped and not come out through other outlets in your basement, such as sinks, toilets, showers and laundry tubs. Make sure that you can get at the valve at all times. Check the valve regularly and remove any material that may prevent the valve from operating properly. You will normally require a permit and inspection to install a backwater valve and sump pit. Since part of the basement floor will be dug up and since proper placement of these items is important, we recommend that you use a qualified plumbing contractor.

**Plumbing Fixture Maintenance:** Have a qualified plumber inspect all flood proofing devices and plumbing fixtures ie. sump pumps, backwater valves, floor drains, etc. regularly to ensure proper operation. Check the operating instructions for more detailed information and safety guidelines, or ask your plumber to explain the details of your system to you. **Additional Protection Measures:** There are also several additional flood protection measures that may be considered.

**Basement Finishes and Furnishings:** In the event a risk of basement flooding is still possible, it is advisable to install impermeable floor and wall finishes, such as ceramic tile, to lessen damage and make cleanup easier. Make sure basement furniture has legs that keep the furniture fabrics above any accumulated flood water. Area rugs are a good alternative to full broadloom as these can be removed and properly cleaned in the event of flood damage.

Insurance - Just In Case. Insurance that fully covers basement flooding damage is an important means of financial protection to home owners. Most policies include or can include coverage for damage caused by sewer back up. Make sure your policy includes sewer back up insurance. Check regularly with your insurance agent or broker to ensure you have appropriate and adequate insurance coverage, including any extensions in coverage that may be available, which were not previously attached. Keep a detailed inventory of your residence. It will be invaluable in the event of loss. Make sure your insurance policies and related records are in a safe location and easily available after an emergency or disaster event.

1. Basement Access

Basement stairway from inside.

2. Observation

fair	review often	repair	not visible	safety	Type: Finished Basement
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Basement Stairs Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Basement Floor Condition

fair	review often	repair	not visible	safety	Material: Carpet
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. Basement Walls Condition

fair	review often	repair	not visible	safety	Material: Drywall
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

- Some cracks noted in drywall
- The area of concern is the basement lower walls at the back door and below the windows. Exterior grading is negative. Slopes towards the house. Downspout draining at the basement entrance door. Can not tell if there is internal wall damage covered up by repairing or repainting the walls. New carpets where installed. Exterior grading needs to be repaired as soon as possible to keep water away from the structure. Due to freezing temperatures, areas shows dry on the thermal image



Damaged corner - rusted nails - moisture intrusion



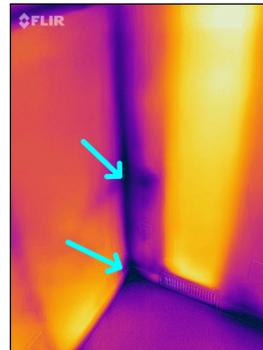
Negative grade



Down spout at door



Crack/movement?



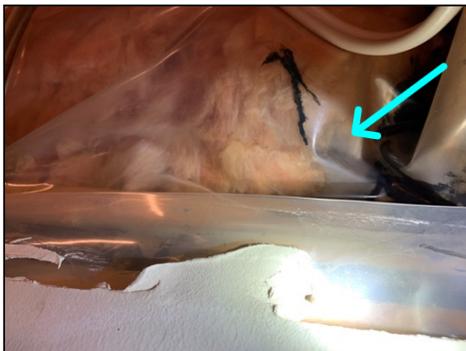
Moisture damaged areas

### 6. Basement Ceilings Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: Drop Tile

- A representative number of drop tiles were removed and recess inspected. Due to limited clearance and time requirement, this was a limited inspection of subfloor, floor joists and plumbing/electrical distribution system and as such, does NOT fall within the Scope of Home Inspection.
- Rust stains noted on the drop down tiles and retainer strips. In line with deck ledger board area. Also Poly B plumbing in the vicinity. Appears to be coming from below the kitchen sink area. No active leaks noted at the time of the inspection
- Lots of storage items tugged inside the ceiling



Moisture stains in insulation



Kitchen sink above problem areas. Leak damage noted

### 7. Window Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 8. Electrical Conditions

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 9. Basement Comments

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

• The presence of mold in concealed areas of the home does NOT fall within the scope of Home Inspection as it is not visibly accessible. If buyer has concerns about mold due to allergies, or suspects the presence of mold, he/she is advised to consult with a qualified contractor and with vendor to agree to carry out destructive investigation.

## Basement Bathroom

### 1. Electrical Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• GFCI in place and operational

### 2. Bathroom Exhaust Fan Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 3. Shower Surround Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 4. Shower Fixtures

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 5. Sink Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 6. Toilet Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 7. Bathroom Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Basement bathroom is in acceptable condition



## Basement Bedroom

### 1. Window Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

• Information: For bedrooms windows, provide an unobstructed opening of NOT less than 0.35 m<sup>2</sup> (3.8 ft<sup>2</sup>) in area with no dimension less than 380 mm (15"). This window shall be operable from the inside without the use of tools or special knowledge. Normally, only slider and casement type windows meet

this requirement. The minimum dimension requirement is waived where a bedroom door provides direct access to the exterior. Where a window with the minimum dimension is required and that window opens into a window well, a clearance of at least 550 mm (22") shall be provided in front of the window. Where the sash swings towards the window-well, the operation of the sash should not reduce the clearance in a manner that restricts escape in an emergency.

## Plumbing

Plumbing systems have common components, but they are not uniform. In addition to fixtures, these components include gas pipes, water pipes, pressure regulators, pressure relief valves, shutoff valves, drain and vent pipes, and water heating devices, some of which we do not test if they are not in daily use. The best and most dependable water pipes are pex and copper, because they are not subject to the buildup of minerals that bond like that within galvanized pipes, and gradually restrict their inner diameter and reduce water volume. Water softener can remove most of these minerals, but not once they are bonded within the pipes, for which there would be no remedy other than a re-pipe. Galvanized steel waterline piping was commonly installed in homes prior to 1960. Galvanized piping can be identified by its silver/grey colour and the presence threaded fittings at the joints. Over time, galvanized waterline piping corrodes from the inside out, resulting in reduced water pressure, restricted water flow and an increased risk of leaks leading to potential flood damage. Galvanized piping has also been found to accumulate lead that has leached into the water from the old lead service lines (no longer in use) as the galvanized plumbing corrodes and releases this built up lead back into the water. Signs of failing galvanized steel waterline piping: Rust around your pipe joints and pitted rust spots on your pipes. Brownish water coming out of your pipes. Lower-than-usual water.

The most common defects are leaking, outdated or problematic systems such as polybutylene. Repairs can often be made, but on occasion total system replacement is the only solution. Dealing with leaks in your plumbing system: Stop the flow of water. If the flooding has been caused by a burst pipe, shut off the main water line for your home. If the leaks are found at a fixture or appliance you may be able to shut off the valve serving the affected fixture or appliance to isolate it from the rest of the system. Get rid of standing water as soon as possible. The longer the water sits, the more damage it will cause. Dry out the area immediately. Opening windows and using fans can help to remove moisture. Use fans to remove moisture only if mould has not started growing, as fans can spread mould spores to other areas.

The water pressure within pipes is commonly confused with water volume, but whereas high water volume is good high water pressure is not. In fact, whenever the street pressure exceeds eighty pounds per square inch a regulator is recommended, which typically comes factory preset between forty-five and sixty-five pounds per square inch. However, regardless of the pressure, leaks will occur in any system, and particularly in one with older galvanized pipes, or one in which the regulator fails, and high pressure begins to stress the washers and diaphragms within the various components. Waste and drainpipes pipes are equally varied and range from modern ABS ones [acrylonitrile butadiene styrene] to older ones made of cast iron, galvanized steel, clay, and even a cardboard like material that is coated with tar. The condition of these pipes is usually directly related to their age. Older ones are subject to damage through decay and root movement, whereas the more modern ABS ones are virtually impervious to damage, although some rare batches have been alleged to be defective. However, inasmuch as significant portions of drainpipes are concealed, we can only infer their condition by observing the draw at drains. Nonetheless, blockages will occur in the life of any system, but blockages in drainpipes, and particularly in main drainpipes, can be expensive to repair, and for this reason we recommend having them video scanned. This could also confirm that the house is connected to the public sewer system, which is important because all private systems must be evaluated by specialists. We attempt to evaluate drain pipes by flushing every drain that has an active fixture while observing its draw and watching for blockages or slow drains, but this is not a conclusive test and only a video scan of the main line would confirm its actual condition. However, you can be sure that blockages will occur, usually relative in severity to the age of the system and will range from minor ones in the branch lines, or at the traps beneath sinks, tubs, and showers, to major blockages in the main line. The minor ones are easily cleared, either by chemical means or by removing and cleaning the traps. However, if tree roots grow into the main drain that connects the house to the public sewer, repairs could become expensive and might include replacing the entire main line. For these reasons, we recommend that you ask the sellers if they have ever experienced any drainage problems, or you may wish to have the main waste line video scanned before the close of escrow. Failing this, you should obtain an insurance policy that covers blockages and damage to the main line. However, most policies only cover plumbing repairs within the house, or the cost of roter service, most of which are relatively inexpensive. Alberta Building Code require all homes to have a floor drain located on the lowest level of the house. It will be located close to the furnace and

water heater, to capture the condensate produced. It's important to keep the drain accessible and free from household items that may reduce its ability to capture water collecting on the floor. Any plumbing fixture below grade is required to be protected from backflow - including floor drains. There are a few different methods to achieve this, but the results are basically the same. If the main sewer backs up, the backwater valve is designed to prevent sewage from entering the house. It's important to know where they are located. They can be found under access covers incorporated in the concrete floor.

**Sewer backups** can be caused by issues such as overloading due to weather events, clogged piping, broken or collapsed sewer lines, blockages due to tree roots, and sump pump malfunctions. Unlike other water damage issues that are caused by leaking waterlines or rainwater getting into your home, sewer water can do a great deal of damage and be hazardous to your health. It can lead to mould growth and damage, and the bacteria from the sewage will contaminate anything it comes in contact with. To help prevent sewer backups: Maintain your drains by performing regular maintenance and avoid pouring potentially harmful substances down the drain, like grease. Get your sump pump serviced regularly by a professional to make sure it is running efficiently. Install a backwater valve on below grade fixtures to help eliminate costly water damage. Dealing with sewer backup: Do not go into the affected areas, as they are contaminated and pose a risk to you and your family. Contact your insurance company. They will open a claim and can provide you with a list of recommended basement flooding cleanup companies. If your natural gas appliances are affected by sewage back up, contact [ATCO Gas](#). If your household electrical installation or appliances are affected by sewage backup, contact [ENMAX](#). If you believe the blockage is on City of Calgary property, please contact 311.

Why is there an odor coming from my floor drain? The floor drain relies on water to provide a trap seal. If the water has evaporated due to lack of use, sewer gas can potentially enter the house. The best thing to do is pour a bucket of water down the drain and watch to make sure you can see the water surface in the pipe. On occasion, there is a requirement for a sump in a home for removing ground water or sewage. The ground water sump is referred to as a storm sump. Depending on the water table, a storm sump may be installed to prevent ground water accumulation under a concrete floor. The discharge from the storm sump is usually to a location outside and sloped away from the house. A sump that carries sewage is referred to a sanitary sump. The sanitary sump will carry sewage from any plumbing fixture in the house that cannot drain by gravity to the City sewer. It will be tied into the homes drainage system and then drain by gravity to the City main. Both of these sumps require a certain level of maintenance, so having them located in an area that allows for this is important. **How do I know if my sump is working properly?** A quick inspection of the sump should be done on a monthly basis. If the sanitary sump fails, the indications are usually the plumbing fixtures draining into the sump will not drain. Check the power supply; if the power supply is fine, the lid may have to be removed to service the pump. Keep in mind, this is a sealed lid and must be re-installed in the same manner. A failure on the storm sump will be evident when water starts appearing on the concrete floor. The procedure for servicing is similar to the sewage sump with the

exception of a sealed lid. **Am I required to have a water meter on my service?** All new homes are required to have a water meter immediately downstream of the main shut off.

**Sewer gas:** Although toxic, the overwhelming stench of sewer gas will likely have you vacating the premises long before the concentration of toxicity becomes dangerous. The most pungent smell in sewer gas is ammonia. Sewer gas leaks caused by cracked drain pipes are often accompanied by water, so any new water leaks may be an indicator of sewer gases also being present in your home. Plumbing fixtures like floor drains, toilets and sinks have traps. If traps become dried out, water seals can be broken, allowing sewer gases to escape. A floor drain that remains inactive for a period of time can dry up faster than you may think. Replenishing floor drain traps periodically can help to avoid breaking of the water seal. Try adding half a cup of mineral oil to the water in your floor drain trap. The oil will not evaporate as fast as the water and the trap will remain wet longer. This is especially helpful for seasonal properties. Finding a leak can be difficult. You can take a quick look around your house for any obvious leaks. If the sewer gas is close enough to the furnace or air conditioner, the air exchanger may just be spreading the stench around, making it nearly impossible to locate its origin. Calling a professional may be the best option when having difficulty finding a sewer gas leak.

#### Main water shut off

One of the most important parts of the plumbing system is the main water shut off. Knowing the location and how to use it is very important. Most main shut offs are in the furnace room but can be located just about anywhere in the basement as long as they have proper access. All new homes will come with a water meter to measure the amount of water used. **Where is my water main shut off located?** The shut off is generally located in the furnace room. If you have difficulty finding it, trace the cold waterline back from the water heater to the plumbing main, as it will remain full size all the way and should be easier to locate. The outside taps or hose bibs are usually located on the front and back of the house and are equipped with a vacuum breaker or anti-siphon device. There are several makes and models but they all have the same general use. There are threads to connect a garden hose that will provide cold hard water for outdoor use. Inside the house, there will be an additional shut off referred to as a stop and drain. This can be in the furnace room or on the pipe just prior to leaving the building. **Does the hose bib require annual maintenance?** Yes. In the fall, the interior shut off should be turned off and the small drain on the side opened to remove the water from the outside tap. Otherwise, it may freeze and cause damage to tap or piping. **Can I leave my hose attached to the tap all winter?** It is recommended that the hose be removed during the winter months to help prevent freezing of the tap and piping. **There appears to be a small amount of water leaking when I turn the water on and off. Is that ok?** Yes. Every outside tap comes with a vacuum breaker where the hose is connected and will release a small amount of water when the tap is turned on or off. This prevents water from being siphoned back into the home in the event of a negative pressure. The vacuum breaker is a code requirement and cannot be removed.

1. Observation:

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Water supply: Public supply

- Since main shutoff valves are operated infrequently, it is not unusual for them to become frozen over time. They often leak or break when operated after a period of inactivity. For this reason main shutoff valves are not tested during a home inspection. We suggest caution when operating shutoffs that have not been turned for a long period of time. All shutoff valves and angle stops should be turned regularly to ensure free movement in case of emergency.



2. Supply Line Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Pex - Cross linked polyethylene, commonly abbreviated PEX or XLPE, is a form of polyethylene with cross links. It is formed into tubing, and is used predominantly in building services pipe work systems, hydronic radiant heating and cooling systems, domestic water piping, and insulation for high tension (high voltage) electrical cables. It is also used for natural gas and offshore oil applications, chemical transportation, and transportation of sewage and slurries. PEX has become a common alternative to polyvinyl chloride (PVC), chlorinated polyvinyl chloride (CPVC) or copper tubing for use as residential water pipes
- Polybutylene - Polybutylene is a form of plastic resin that was used extensively in the manufacture of water supply piping from 1978 until 1995



Poly B



Monitor for leaks

3. Waste Line Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Material: ABS

4. Floor drain

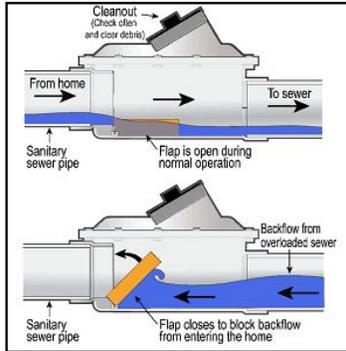
fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 5. Sewage Backflow Preventer

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Observations:**

- Sewage Backflow Preventer could not be confirmed. You may wish to ask the seller if it's installed
- A backwater valve, backflow valve or backflow preventer automatically senses a reverse flow (either water or sewage flowing the wrong direction) in a pipe and completely closes the line when the condition occurs



### 6. Plumbing Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- All plumbing components tested well at time of inspection unless otherwise noted.

# Safety | Tips

## Polybutylene (Poly-B) Pressure Water Piping

Failures of pressure water piping installations involving Poly-B within Canada and the US had resulted in a number of class action lawsuits. A notice of the Court's final statement was published in various Canadian print media on June 11, 2004. Poly-B claims deadline was May 31, 2005 or up to 15 years after date of installation.

### Poly-B in Alberta

- Poly-B piping was introduced to the Alberta construction industry in the mid-1970s. Unconfirmed estimates are that about 148,000 homes in Alberta have Poly-B water systems.
- Poly-B would not be in your home if it was built before 1975 and no plumbing renovations have since been carried out.
- The Poly-B piping installed in Alberta primarily utilized copper or brass metal insert fittings and soft copper crimping rings, not plastic insert fittings and aluminum bands which are reported to be more susceptible to failures causing leaks.

### Product Information

- Poly-B piping can be identified as flexible plastic piping with a light grey colour. The markings on the pipe indicate: pipe size, manufacturer's name or trademark, date code, material designation, pressure rating, certification agency and construction standard (e.g., CSA-B 137.8).
- Poly-B piping was tested and certified by the Canadian Standards Association (CSA) and remained an acceptable product for potable water systems, but stipulated that the pipe was not to be used for continuous circulating hot water lines as listed in the NRC-CNRC National Plumbing Code of Canada 1995.
- Poly-B water piping had been installed in residential dwellings and commercial buildings throughout Canada for more than 20 years.
- Poly-B piping and fittings were intended for use in both hot and cold water distribution systems for pressures up to 100 psi (690 kPa) and operating at temperatures up to and including 180°F (82°C).
- Some manufactures stamped on the pipe that it was not to be used on continuous circulating waterlines.
- Poly-B piping was produced from a polybutylene resin, in 1998, manufacturers stopped producing Poly-B piping as product supplier's suspended production of this resin.
- Poly-B is no longer listed in the current plumbing codes, however codes are not retroactive, this means that previous acceptable plumbing products do remain acceptable if the product does not pose a health safety hazard.

Last updated/reviewed August 2016

For more information, please call Municipal Affairs, Safety Services at 1-866-421-6929 or visit [www.municipalaffairs.alberta.ca](http://www.municipalaffairs.alberta.ca)



## Electrical

Electrical wiring. House fires caused by faulty electrical wiring are common. Modern homes have an ample supply of power and electrical outlets. Older homes do not.

It's typical to see extension cords running from room to room in older homes. This places a burden on the electrical system, outlets and cords and thus could lead to a fire. Another common electrical problem found in all ages of homes is exposed electrical wires. Any wire that is exposed is susceptible to physical damage. If this occurs, it's sure to wreak havoc. Open splice wire (when wire is conjoined using only electrical tape and/or wire connectors) is a typical do-it-yourself job and is common in garages, attics and crawlspaces as well as above dropped ceilings. This is high priority, however, and should be corrected by a licensed electrician.

There are a wide variety of electrical systems with an even greater variety of components, and any one particular system may not conform to current standards or provide the same degree of service and safety. What is most significant about electrical systems however is that the CSA Canadian Electrical Code is not retroactive, and therefore many residential systems do not comply with the latest safety standards. Regardless, we are not electricians and in compliance with our standards of practice we only test a representative number of switches and outlets and do not perform load calculations to determine if the supply meets the demand. However, in the interests of safety, we regard every electrical deficiency and recommended upgrade as a latent hazard that should be serviced as soon as possible, and that the entire system be evaluated and certified as safe by an electrician.

Therefore, it is essential that any recommendations that we may make for service or upgrades should be completed before the close of escrow, because an electrician could reveal additional deficiencies or recommend some upgrades for which we would disclaim any further responsibility. However, we typically recommend upgrading outlets to have ground fault protection, which is a relatively inexpensive but essential safety feature. These outlets are often referred to as GFCI, or ground fault circuit interrupters and, generally speaking, have been required in specific locations for more than thirty years, beginning with swimming pools and exterior outlets in 1971, and the list has been added to ever since: bathrooms in 1975, garages in 1978, spas and hot tubs in 1981, hydro tubs, massage equipment, boat houses, kitchens, and unfinished basements in 1987, crawlspaces in 1990, wet bars in 1993, and all kitchen countertop outlets with the exception of refrigerator and freezer outlets since 1996. Similarly, AFCI or arc fault circuit interrupters, represent the very latest in circuit breaker technology, and have been required in all bedroom circuits since 2002. However, inasmuch as arc faults cause thousands of electrical fires and hundreds of deaths each year, we categorically recommend installing them at every circuit as a prudent safety feature. Never exceed the manufacturer's specified wattage or lamp type on light fixtures.

We do not evaluate smoke detectors. Smoke Alarms current requirement:

- (a) Install smoke alarms on each floor level, including basements.
- (b) Install smoke alarms within five m (16 feet) of bedrooms.
- (c) Smoke alarms are to be powered from a branch circuit containing lighting. Smoke alarms are not to be installed on a GFCI or AFCI part of the circuit.
- (d) When more than one smoke detector is being installed, interconnect the smoke detectors with 14/3 NMD-90 cable and connect according to manufacturer's instructions. Note: The current Alberta Building Code permits only wired in smoke alarms. (Alberta Building Code –Article 9.10.18.3).

We do not evaluate Carbon Monoxide detectors.

Carbon monoxide (CO) detectors have come on the market over the last few years because our homes are now more airtight and don't evacuate pollutants, notably CO. We now know that this gas has been the source of numerous accidents that could possibly have been avoided. The installation of at least one CO detector in your home is a good safety precaution and in some municipalities, it is the law. A detector might be your second line of defense, but it is necessary. You should have one in your home today.

### 1. Main Service Drop

fair	review often	repair	not visible	safety	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Type: Main Service Drop is underground

### 2. Electrical panel Condition

fair	review often	repair	not visible	safety	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type / Materials:

- Circuit Breakers
- Branch circuit wiring is copper at the panel
- The main disconnect is a 100 amps breaker

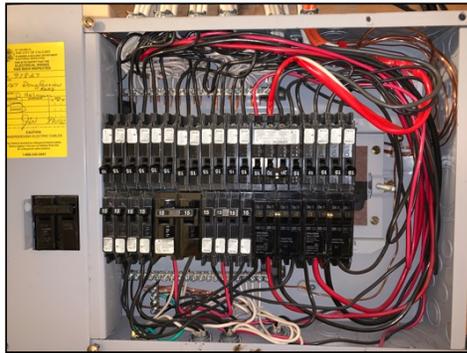


### 3. Main Panel Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- No significant defects noted inside panel
- The system does not include arc-fault circuit interrupters, which effective January 1st, 2002, are mandated by the national electrical code to protect 15 and 20 amp branch circuits serving bedrooms.

An Arc Fault Circuit Interrupter (**AFCI**) is a circuit breaker designed to prevent fires by detecting a non-working (i.e., non-intended/non-useful) electrical arc and disconnecting the power before the arc starts a fire. An AFCI should, but may not always, distinguish between a working arc that may occur in the brushes of a vacuum cleaner, on operation of a light switch, the insertion or removal of a plug into an electrical receptacle, or during the operation of other household devices and a non-working arc that can occur. For example, a lamp cord that has a broken conductor in the cord from overuse. Arc faults in a home are one of the leading causes for household fires. Worthwhile safety upgrade



## 4. Smoke detector comments

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Locations:

- Basement
- Main Floor
- Second Floor

• While there may be serviceable smoke and carbon monoxide detectors in the house at time of inspection, buyer is urged to review existence of such upon close as they are on occasion removed by seller. These items are generally mandatory in all municipalities. A smoke alarm should be on every level (including basements). A carbon monoxide (CO) alarm to be installed in every dwelling that contains a fuel burning appliance, or shares a common wall/floor/ceiling with a storage garage

• We do NOT evaluate smoke detectors as part of our service. During a power outage wired in smoke alarms (required in homes built after 1977) requiring 110-volt power supply will be disabled. It is advisable to have smoke alarms with battery backup or additional smoke alarms that are battery operated. Periodic testing is suggested to ensure proper working order.

Smoke Alarms current requirement:

- Install smoke alarms on each floor level, including basements.
- Install smoke alarms within five m (16 feet) of bedrooms.
- Smoke alarms are to be powered from a branch circuit containing lighting. Smoke alarms are not to be installed on a GFCI or AFCI part of the circuit.
- When more than one smoke detector is being installed, interconnect the smoke detectors with 14/3 NMD-90 cable and connect according to manufacturer's instructions.

Note: The Alberta Building Code permits only wired-in smoke alarms. (Alberta Building Code – Article 9.10.18.3). The smoke alarm should be operating once AC power is applied, fresh batteries are installed and testing is complete. **WHEN TO REPLACE SMOKE ALARMS:** In accordance with the National Fire Protection Association (NFPA), Kidde recommends replacing smoke and heat alarms every ten years, and replacing carbon monoxide and combination alarms every seven years to benefit from the latest technology upgrades. If you are unsure of your alarm's age, look for the manufactured date on the back of the alarm. **TESTING PROCEDURES:** You can test your smoke alarm by pushing the Test/Hush button on the cover and holding it down for a minimum of 5 seconds. This will sound the alarm if the electronic circuitry, horn and battery are working. In an interconnected installation all interconnected alarms should sound when the test feature on any one of the interconnected alarms is activated. If no alarm sounds, check the fuse or circuit breaker supplying power to the alarm circuit. If the alarm still does not sound, the unit may have defective batteries or another failure.

DO NOT use an open flame to test your smoke alarm, you could damage your alarm or ignite combustible materials and start a structure fire. Test your smoke alarms weekly to ensure proper operation. Erratic or low sound coming from your smoke alarm may indicate a defective alarm, and should be returned for service (refer to your warranty). Replace smoke alarms every 10 years. Alarms monitor the home every minute of every day and their lifespan is not infinite. If you don't know how old your alarm is, you should replace it.

- Recommend replacing smoke detectors if you can not determine the age. Always refer to the manufactures instructions



5. Carbon monoxide detector

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Observations:

• Where a fuel-burning appliance or a storage garage is associated with a single family dwelling, a carbon monoxide alarm is required inside each bedroom, or outside each bedroom, within 5m of each bedroom door, measured following corridors and doorways. Carbon monoxide alarms shall be installed in every home containing a solid-fuel-burning appliance, as required in the current edition of the Alberta Building Code. The alarms are also recommended for existing homes. Kidde recommends consumers replace their CO alarms every seven years. In anticipation of UL's end of life warning recommendation, all Kidde CO alarms manufactured after 2001 contain an end of life warning. This warning is set to sound seven years after the unit received initial power. Kidde conducts long term reliability tests, which show that our CO sensors perform consistently for at least seven years. In addition, beginning in 2008, Kidde increased its warranty on all Nighthawk CO alarms from five years to seven years. \* Please note: Kidde units manufactured prior to 2013 – had a 7-year lifespan ONLY. Please check the date stamp on the back of your CO alarm to see if it needs replacement. Always refer to the manufacturers instructions

6. Electrical Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• The electrical service to this home is typical and adequate for a single family dwelling. A representative number of receptacles was tested and are generally serviceable, unless otherwise noted.

## Electrical Safety

Electricity is a necessity for modern-day living, but electricity can be dangerous if it is not dealt with properly. To avoid electrical injury, treat electricity with respect using these safety tips.

### Practice electrical safety at home

- Always contact a qualified professional to do any electrical servicing.
- Equip all outdoor and bathroom outlets with Ground Fault Circuit Interrupters (GFCIs).
- Do not overload electrical circuits.
- Never stick toys, keys, fingers or anything else into an electrical outlet.
- Do not plug or unplug electrical appliances or tools with wet hands or in wet conditions.
- Replace damaged or frayed cords.
- Do not attempt to disconnect your power meter. It could explode.
- Use cords with a third prong, and always ensure the third prong remains in use.

### Avoid overhead power lines when:

- Using a ladder.
- Pruning or cutting trees.
- Cleaning a pool.
- Installing or moving an antenna.
- Working on the roof.
- Carrying long tools or pipes.
- Setting up and moving scaffolding.
- Moving augers, grain truck boxes, wing-type cultivators and air seeders.

### Be safe around fallen and sagging wires

- Always assume a downed power line to be energized.
- Stay at least 15 metres (45 feet) away from downed power lines. If you feel a tingling sensation, place your feet together and shuffle or hop out of the area without touching anything.
- Never touch an energized wire with your hand or any other object.
- If you notice a damaged electrical facility, notify your electric company immediately.

### Teach children to respect electricity

- Never play around power substations, poles, towers, or fences or trees near power lines.
- Never fly kites near overhead power lines.
- Never spray water guns or hoses at power lines.
- Never try to open or poke sticks or other objects into underground transformer boxes.
- Obey 'keep out', 'danger' or 'high voltage' warning signs.
- Avoid going outside during a lightning storm.

For more information, please call 1-866-421-6929 or visit [www.municipalaffairs.gov.ab.ca/ss](http://www.municipalaffairs.gov.ab.ca/ss).



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## Smoke Alarm Home Installation



### Alberta's Safety System

Alberta Municipal Affairs works in partnership with the Safety Codes Council, municipalities, corporations, agencies, and other organizations, to deliver effective community-focused public safety programs and services to Albertans.

**Once a fire starts it can spread rapidly. In as little as three minutes, a small fire can erupt into a “flashover” (when a room gets so hot everything suddenly bursts into flames).**

**Your chances of surviving a home fire may be significantly increased if a working smoke alarm is present in your home. Smoke alarms, when properly installed, tested and maintained, provide an early warning of smoke and fire danger, which can increase your chance of escape.**

### Required Smoke Alarms

Smoke alarms conforming to *CAN/ULC-S531*, “*Smoke Alarms*,” must be provided in:

- each home; and
- each bedroom or sleeping room ancillary spaces and common spaces in a house with a secondary suite.

### Smoke Alarm Installation

Smoke alarms shall be installed in conformance with *CAN/ULC-S553*, “*Installation of Smoke Alarms*” and:

- be installed with permanent connections to an electrical circuit; and
- have no disconnect switch between the overcurrent device and the smoke alarm.

### Importance of permits

The *Safety Codes Act* requires that permits in Alberta be obtained prior to commencing work on any buildings covered by the Alberta Building and Fire Codes, the Canadian Electrical Code, the Gas Code, or the National Plumbing Code.

Permits are part of a process to access compliance to a minimum standard of construction safety for the benefit of all Albertans. If construction projects are undertaken without required permits, the owner may be subject to penalties and extra costs incurred to bring a project into compliance.

As the property owner, you are responsible to obtain all necessary permits. A contractor can look after this on your behalf; however, you should specify in writing, who will get the required permits. Some jurisdictions may require a letter of authorization before a contractor can apply for permit(s) on your behalf.

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## Smoke Alarm Home Installation



**IMPORTANT:** In the case where regular power supply to the smoke alarm is interrupted, the smoke alarm shall be provided with a battery as an alternative power source that can continue to provide power to the smoke alarm for a period of no less than 7 days in the normal condition, followed by 4 minutes of alarm.

### Smoke Alarm Maintenance and Care

The manufacturer's specifications should be reviewed for the required maintenance and replacement of batteries. Where instructions are necessary to describe the maintenance and care required for smoke alarms, instructions shall be posted in a location where they will be readily available to the occupants for reference.

### Location of Smoke Alarms

Sufficient smoke alarms shall be installed so that:

- there is at least one smoke alarm on each storey, including basements.
- on any storey of a home containing sleeping rooms, a smoke alarm must be installed:
  - in each sleeping room; and
  - in a location between the sleeping rooms and the remainder of the storey, and if the sleeping rooms are served by a hallway, the smoke alarm shall be located in the hallway.

**NOTE:** Smoke alarms within homes shall be installed on or near the ceiling. Refer to the manufacturer's installation instructions.

### Benefits of getting a permit

When you get a permit, certified safety codes officers (inspectors) will:

- give you expert advice,
- review your plans to find any potential problems,
- inspect your project, and
- make sure your project meets the Alberta Building Code.

Making changes at the planning stage can save you money, rather than making costly corrections after construction. Certified safety codes officers will give you an inspection report(s) and follow-up on deficiencies to make sure your project is safe and in compliance.

### Where do you get a permit?

Permits are available through municipalities that administer the *Safety Codes Act* and through agencies that provide inspection services on behalf of municipalities or the province. If you don't know whether your municipality issues permits, contact the Alberta Safety Codes Authority (ASCA) at 1-888-413-0099 or visit [safetycodes.ab.ca/ASCA](http://safetycodes.ab.ca/ASCA).

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## Smoke Alarm Home Installation



Where a choice arises as to where on a storey to locate the required smoke alarm or alarms, one should be located as close as possible to a living area, provided the requirements to bedrooms are also satisfied.

### Interconnection of Smoke Alarms

Where more than one smoke alarm is required in a home, the smoke alarm shall be wired so that the activation of one alarm will cause **all** alarms within the home to sound.

Smoke alarms in a house with a secondary suite shall be wired so that the activation of any one smoke alarm causes **all** smoke alarms within the house with a secondary suite to sound.

### Two-storey split-level home

A smoke alarm is not required on each level in a split-level home as each level does not count as a separate storey. You may determine the number of storeys in a split-level home and which levels are part of which storey as follows:

- establish grade, which is the lowest of the average levels of finished ground adjoining each exterior wall of the house.
- identify the first storey, which is the uppermost storey having its floor level not more than 2 m above grade.
- identify the basement, which is the storey or storeys located below the first storey.
- identify the second storey and, where applicable, the third storey.

As a minimum, one smoke alarm is required to be installed in each storey, preferably on the upper level of each one. As noted above, however, when the home contains more than one sleeping area, an alarm must be installed to serve each area. Where the sleeping areas are on two levels of a single storey in a split-level home, an additional smoke alarm must be installed so that both areas are protected.

### Applying for a building permit

When applying for a building permit, you must submit the following information to your local authority:

- details of the project or occupancy to be covered by the permit.
- details of the land on which the project will be located, including a description that will easily identify and locate the building lot.
- plans, specifications and other documents showing, in detail, the proposed occupancy of all parts of the building, state the value of the proposed project.
- state the names, addresses and phone numbers of the project owner, designer and contractor.

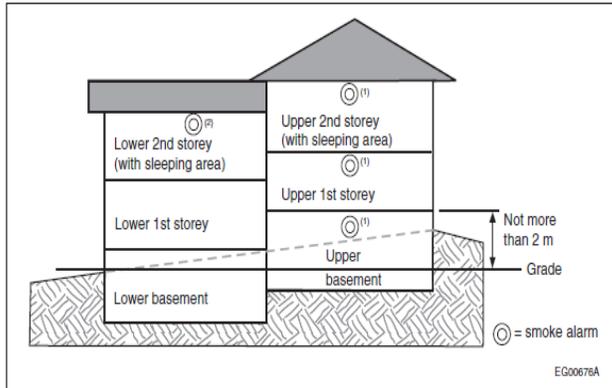
### Hire qualified tradespeople

Specific trades such as electricians, plumbers and gasfitters must be certified to work in Alberta. To find out if the tradespeople you are hiring need to be certified in Alberta or to verify an individual's status, you may contact *The Apprenticeship and Industry Training* office by calling 310-0000.

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Smoke Alarm Home Installation



Existing Homes

Redevelopment of an existing home may require the installation of additional smoke alarms that may have to be permanently wired to the home electrical system.

- Homes that have 'existing' smoke alarms hardwired to an electrical circuit, as required above, **cannot** be replaced with a battery operated alarm. Any replacement must be of a type comparable to the original or better.
- Smoke alarms installed in addition to hardwired alarms are permitted to be battery operated.

Please contact your local Building Safety Codes Officer for further information related to redevelopment requirements for the installation of smoke alarms in any existing dwelling unit.

Nuisance alarms

- **Improper location:** Installing an alarm in the kitchen or other high smoke or steam area will induce a nuisance activation of the alarm.
- **Wear and tear:** A smoke alarm may wear out, regardless of type or quality. Smoke alarms should be replaced every 10 years or as per the manufacturer's recommendations.

*These brochures may be updated periodically. They have no legal status and cannot be used as an official interpretation of the various bylaws, codes and regulations currently in effect.*

More information:

**Alberta Municipal Affairs**  
 Community & Technical Support  
 16<sup>th</sup> Floor, Commerce Place  
 10155 - 102 Street  
 Edmonton, Alberta T5J 4L4  
 Toll-free: 1-866-421-6929  
 safety.services@gov.ab.ca  
[municipalaffairs.gov.ab.ca](http://municipalaffairs.gov.ab.ca)

**Safety Codes Council**  
 Suite 500  
 10405 Jasper Avenue  
 Edmonton, Alberta T5J 3N4  
 Toll-free within Alberta:  
 1-888-413-0099  
 1-888-424-5134  
 webmaster@safetycodes.ab.ca  
[safetycodes.ab.ca](http://safetycodes.ab.ca)

**Alberta Safety Codes Authority (ASCA)**  
 Toll-free within Alberta:  
 1-888-413-0099  
[askasca@safetycodes.ab.ca](mailto:askasca@safetycodes.ab.ca)

Call (or click) before you dig!

**Alberta One Call** will locate utility lines on your property. Call or click before you start any project that involves digging in your yard. Alberta One Call will locate gas, water, electricity, drainage, telephone and cable TV lines. Allow at least two full working days for Alberta One Call to locate your utility lines.

Safety

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## Carbon Monoxide Home Installation



### Alberta's Safety System

Alberta Municipal Affairs works in partnership with the Safety Codes Council, municipalities, corporations, agencies, and other organizations, to deliver effective community-focused public safety programs and services to Albertans.

**Carbon monoxide (CO) alarms, when properly installed, tested and maintained, are a valuable safety tool that can provide you and your family with warning to the presence of dangerous levels of carbon monoxide in your home. Treat the alarm signal as a real emergency each time.**

**If the alarm sounds and you are not experiencing any symptoms of CO poisoning, press the reset button. If the alarm continues to sound, call the fire department immediately and leave your home until a professional checks to find the reason why the alarm sounded and any problems are fixed.**

### What is Carbon Monoxide?

Carbon monoxide (CO) is an invisible, odourless, colourless, tasteless and poisonous gas created when any carbon-based fuel is burned.

### Symptoms of CO Poisoning

Common symptoms of CO poisoning include nausea, dizziness, muscle aches, vomiting, general weakness, loss of co-ordination, impaired judgment, confusion, drowsiness, headaches, or even death.

### CO in Homes

In the home, heating and cooking equipment are possible sources of CO. Vehicles idling in an attached garage can produce dangerous levels of CO. Back drafting chimneys and flues (common when ventilation fans are used in tightly sealed homes) may also allow combustion gases, including CO, to enter the home.

### Importance of permits

The *Safety Codes Act* requires that permits in Alberta be obtained prior to commencing work on any buildings covered by the Alberta Building and Fire Codes, the Canadian Electrical Code, the Gas Code, or the National Plumbing Code.

Permits are part of a process to access compliance to a minimum standard of construction safety for the benefit of all Albertans. If construction projects are undertaken without required permits, the owner may be subject to penalties and extra costs incurred to bring a project into compliance.

As the property owner, you are responsible to obtain all necessary permits. A contractor can look after this on your behalf; however, you should specify in writing, who will get the required permits. Some jurisdictions may require a letter of authorization before a contractor can apply for permit(s) on your behalf.

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## Carbon Monoxide Home Installation



### CO Home Alarms

The Alberta Building Code recognizes that the only means we have of warning occupants to the presence of CO in the home is by installing CO alarms in every new building that contains a residential occupancy and a fuel-burning appliance or an attached storage garage.

To safeguard against the presence of CO gases that may place your life and the lives of your family at risk, the installation of CO alarms are also highly recommended for all existing homes.

### Dual CO/Smoke Alarms

CO alarms do not serve as smoke alarms. However, it is important to note that dual CO/smoke alarms conforming to *CAN/CSA-6.19*, "*Residential Carbon Monoxide Alarming Devices*" and *CAN/ULC-S531*, "*Smoke Alarms*," are acceptable.

### Spillage of Combustion Products

The Alberta Building Code addresses the potential for spillage from combustion appliances with requirements for makeup air and CO alarms.

Depressurization caused by the principal ventilation system itself is not an issue in houses with balanced systems. However, appliances can malfunction and venting systems can fail.

Depressurization of the house by the ventilation system or other exhaust devices can cause the spillage of combustion products from certain types of combustion appliances. The types of appliances that are susceptible to pressure-induced spillage are vented through a natural draft chimney rather than through an arrangement of exterior venting which uses a fan to draw the products of combustion out of the house.

The likelihood of entry of CO is also increased if your house is depressurized in relation to the garage. This can readily occur due to the operation of exhaust equipment or to the stack effect created by heating your home when the temperature difference between outside and inside is the greatest.

### Benefits of getting a permit

When you get a permit, certified safety codes officers (inspectors) will:

- give you expert advice,
- review your plans to find any potential problems,
- inspect your project, and
- make sure your project meets the Alberta Building Code.

Making changes at the planning stage can save you money, rather than making costly corrections after construction. Certified safety codes officers will give you an inspection report(s) and follow-up on deficiencies to make sure your project is safe and in compliance.

### Where do you get a permit?

Permits are available through municipalities that administer the *Safety Codes Act* and through agencies that provide inspection services on behalf of municipalities or the province. If you don't know whether your municipality issues permits, contact the Alberta Safety Codes Authority (ASCA) at 1-888-413-0099 or visit [safetycodes.ab.ca/ASCA](http://safetycodes.ab.ca/ASCA).

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## Carbon Monoxide Home Installation



Even at a relatively low level of depressurization, almost all fireplaces are spillage-susceptible. This also includes fireplaces with “airtight” glass doors and outside combustion air intakes, since most “airtight” doors are not entirely airtight. Even closed-type solid-fuel-burning appliances whose stoking doors are left open, can spill products of combustion into the house when operating in their “die down” or smoldering stages.

**IMPORTANT:** CO alarms provide a relatively low-cost means to warn occupants when depressurization is causing spillage of toxic combustion gases into a home.

### CO Alarm Requirements

The Alberta Building Code states that certified CO alarms are required in every building which contains a residential occupancy and also contains:

- a fuel-burning appliance; and/or
- an attached storage garage.

Labels found on certified CO alarms are your assurance that the alarm was tested and that it conforms to established safety standards.

CO alarms must conform to requirements of the Canadian Standards Association *CAN/CSA Standard 6.19 “Residential Carbon Monoxide Alarming Devices”* as follows: CO alarms must be equipped with an integral alarm that satisfies the audibility requirements of *CAN/CSA Standard 6.19 “Residential Carbon Monoxide Alarming Devices.”*

- CO alarms must be mechanically fixed to a surface at a height recommended by the manufacturer.
- CO alarms must have no disconnect switch between the overcurrent device and the carbon monoxide alarm where the CO alarm is powered by the dwelling unit’s electrical system.

Both battery-operated (CO) alarms and (CO) alarms that are connected to the dwelling unit’s electrical system are acceptable.

There are several models on the market with different features such as power supply back up and indicators to indicate replacement is required. Check your model type to ensure it has the features that you need.

### Applying for a building permit

When applying for a building permit, you must submit the following information to your local authority:

- details of the project or occupancy to be covered by the permit.
- details of the land on which the project will be located, including a description that will easily identify and locate the building lot.
- plans, specifications and other documents showing, in detail, the proposed occupancy of all parts of the building, state the value of the proposed project.
- state the names, addresses and phone numbers of the project owner, designer and contractor.

### Hire qualified tradespeople

Specific trades such as electricians, plumbers and gasfitters must be certified to work in Alberta. To find out if the tradespeople you are hiring need to be certified in Alberta or to verify an individual’s status, you may contact *The Apprenticeship and Industry Training* office by calling 310-0000.

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Page 3	

Safety

Tips

## Carbon Monoxide Home Installation



### Required CO Alarm Locations

- Where a room contains a solid fuel-burning appliance, a CO alarm conforming to *CAN/CSA-6.19-01, "Residential Carbon Monoxide Alarming Devices,"* shall be mechanically fixed:
  - at the manufacturer's recommended height where these instructions specifically mention solid-fuel-burning appliances; or
  - in the absence of specific instructions related to solid-fuel-burning appliances, on or near the ceiling.
- Where a fuel-burning appliance is installed in a suite of residential occupancy, a CO alarm shall be installed:
  - inside each bedroom; or if outside the bedroom, within 5 m of each bedroom door, measured following corridors and doorways.
- Where a fuel-burning appliance is installed in a service room that is not in a suite of residential occupancy, a CO alarm shall be installed:
  - either inside each bedroom, or if outside the bedroom, within 5 m of each bedroom door, measured following corridors and doorways, in every suite of residential occupancy that shares a wall or floor/ceiling assembly with the service room; and
  - in the service room.
- For each suite of residential occupancy that shares a wall or floor/ceiling assembly with a storage garage or that is adjacent to an attic or crawl space to which the storage garage is also adjacent, a CO alarm shall be installed:
  - inside each bedroom; or if outside the bedroom, within 5 m of each bedroom door, measured following corridors and doorways.

**Homes containing a secondary suite must have CO alarms in both the main dwelling and the secondary suite. These must be hard-wired and inter-connected so they will operate in unison.**

*These brochures may be updated periodically. They have no legal status and cannot be used as an official interpretation of the various bylaws, codes and regulations currently in effect.*

#### More information:

##### Alberta Municipal Affairs

Community & Technical Support  
16<sup>th</sup> Floor, Commerce Place  
10155 - 102 Street  
Edmonton, Alberta T5J 4L4

 Toll-free: 1-866-421-6929  
 [safety.services@gov.ab.ca](mailto:safety.services@gov.ab.ca)  
 [municipalaffairs.gov.ab.ca](http://municipalaffairs.gov.ab.ca)

##### Safety Codes Council

Suite 500  
10405 Jasper Avenue  
Edmonton, Alberta T5J 3N4

 Toll-free within Alberta:  
1-888-413-0099  
1-888-424-5134  
 [webmaster@safetycodes.ab.ca](mailto:webmaster@safetycodes.ab.ca)  
 [safetycodes.ab.ca](http://safetycodes.ab.ca)

##### Alberta Safety Codes Authority (ASCA)

 Toll-free within Alberta:  
1-888-413-0099  
 [askasca@safetycodes.ab.ca](mailto:askasca@safetycodes.ab.ca)

#### Call (or click) before you dig!

**Alberta One Call** will locate utility lines on your property. Call or click before you start any project that involves digging in your yard. Alberta One Call will locate gas, water, electricity, drainage, telephone and cable TV lines. Allow at least two full working days for Alberta One Call to locate your utility lines.

## Heating

The heating, ventilation, and air conditioning and cooling system (often referred to as HVAC) is the climate control system for the structure. The goal of these systems is to keep the occupants at a comfortable level while maintaining indoor air quality, ventilation while keeping maintenance costs at a minimum. The HVAC system is usually powered by electricity and natural gas, but can also be powered by other sources such as butane, oil, propane, solar panels, or wood.

Operation of the airconditioning system will be done temperature permitting. There could be a risk of damage to the compressor if cooling systems are tested when the exterior temperature is less than 16 °C.

A "heating boiler" (also called hydronic heating) heats the building using hot water. A steam heating boiler actually boils water and sends steam through building heating pipes, steam radiators or convectors to deliver heat. Heat pumps use the same equipment that serves for cooling or air conditioning, but in a reverse operating direction the heat pump extracts heat from outside air and sends it into the building. Hybrid or mixed heating systems: Some heating systems combine *both* hot water and hot air to heat a building, such as water to air systems which use a heating boiler (oil, gas, or electric) to heat water which circulates through (and inside of) a heat exchanger (that looks like a car radiator).

The heat exchanger in a water to air heating system is then placed inside of an air handler or blower compartment where a blower fan circulates building air from return ducts to a plenum where air is blown across the heat exchanger and then the warmed air is delivered to the occupied space through additional warm air ducts or radiators.

For a more thorough investigation of the system please contact a licensed HVAC service specialist. The components of most heating systems have a design life ranging from ten to twenty years, but can fail prematurely with poor maintenance, which is why we attempt to apprise you of their age. We test and evaluate them in accordance with the standards of practice, which means that we do not dismantle any of the following concealed components: the heat exchanger, which is also known as the firebox, electronic air cleaners, humidifiers, and in line duct motors or dampers. However, even the most modern heating systems can produce carbon monoxide, which in a sealed or poorly ventilated room can result in sickness, debilitating injury, and even death.

We perform a conscientious evaluation of all such systems, but we are not specialists. The inspection of heating equipment is not a comprehensive examination of the system and does not replace review and maintenance by a licensed professional HVAC practitioner. Therefore, in accordance with the terms of our contract, it is essential that any recommendation that we make for service or a second opinion be scheduled before the close of escrow, because a specialist could reveal additional defects or recommend further upgrades that could affect your evaluation of the property, and our service does not include any form of warranty or guarantee. Furnace maintenance is a very important part of the efficient operation of a warm air heating system. Furnace maintenance should never be neglected. The furnace manufacturer will provide recommendations for proper maintenance in their installation and operation manuals. With proper maintenance, the life of the

furnace will be extended, its efficiency will improve, and the costs to operate the furnace will be reduced. Maintaining a furnace includes the cleaning and replacement of the air filter on a regular basis. Furnaces should be periodically serviced by a technician. A maintenance schedule should be used and be posted near the furnace. The maintenance schedule should have dates, maintenance comments, descriptions of repairs performed, and contact information for the local technician who works on the furnace. The heating system should be inspected by a qualified service technician every year. It is recommended that the system be inspected before the heating season. The technician can ensure the continued safe operation of the heating system. FILTERS: Proper maintenance of the air filter is important for the efficiency of the furnace. A dirty or clogged air filter restricts the air flow through the system and can cause an excessive rise in the temperature. This temperature rise may cause damage to the heat exchanger, or lower operating efficiency. A disposable air filter should be checked every month and replaced when dirty. If a permanent air filter is installed, it should be checked and cleaned periodically according to the manufacturer's recommendation.

Return air inlet grills that are obstructed with dirt, debris, or furniture or that are improperly located or are just too small mean that because the heating or cooling system is "starved for air", the supply air flow into occupied spaces will also be reduced. Air Registers Located Outside the Room (return air) mean that if the room door is closed and not undercut, both heating and cooling capacity in that room will be reduced. To understand the effect of a room that has only air supply registers and no return registers when the room door is shut, just imagine the air conditioning or warm air heating system having to blow air into a pressurized space.

The inspector will test the heating and air conditioner using the thermostat or other standard operating controls. Home Smart Technology systems should be explained by the seller. For a more thorough investigation of the system please contact a licensed HVAC service person.

Know where the furnace disconnect switch or breaker is located. If it is a breaker it will be located on the electrical panel, if it is a switch it should be located between the furnace and the entrance and should be marked.

1. Heating

Type: Forced-air gas heating systems are used in central air heating/cooling systems for houses. Sometimes the system is referred to as "Forced hot air". Generally, they have a furnace heated by natural gas that pushes hot air through duct-work, then through vents to heat a building. Depending on the age of the system, forced air gas furnaces utilize either a pilot light or a solid state ignition system (spark or hot surface ignition) to light the natural gas burner.[2] The natural gas (a natural resource) is fed to buildings from a main gas line. The duct work supplying the hot air (and sometimes cool air if an AC unit is tied into the system) can be insulated or not. A climate-control device (e.g., thermostat) regulates and controls the usage of the furnace. A digital thermostat can be programmed to activate the gas furnace at certain times. For example, a resident may want the temperature in their dwelling to rise 15 minutes before returning from work.

Simple types of gas-fired furnace lose significant amounts of energy in the hot-temperature of the exhaust gases. Modern high-efficiency condensing furnaces condense the water vapour (one of the by-products of gas combustion) extracting the latent heat to pre-heat the incoming furnace airflow. This increases the efficiency (energy delivered into the building vs. heating value of gas purchased) to over 90%. An incidental beneficial effect is that the exhaust flue is much smaller and can be made of plastic pipe since the exhaust gas is much cooler. As a result it can be more easily routed through walls or floors. However, the condensing furnace is more expensive initially because of the extra induced draft fan and condensate pump required, and the extra heat exchanger in the firebox.

2. Air Filter Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• We recommend changing or cleaning the filter monthly during the heating season.

3. Distribution Ducting Condition

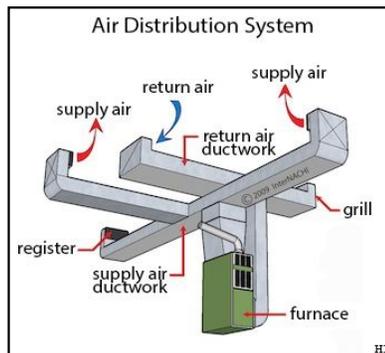
fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Type: Ducts and Registers

- Typical Air Distribution System diagram
- Significant portions of the ducts are concealed and cannot be viewed.
- Secure loose exhaust duct securing strap



Loose duct retainer



## 4. Humidifier

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Definition:

• A humidifier is a device that increases humidity (moisture) in a single room or an entire building. In the home, point-of-use humidifiers are commonly used to humidify a single room, while whole house or furnace humidifiers, which connect to a home's **HVAC** system, provide humidity to the entire house. Excessively low humidity may occur in hot, dry desert climates, or indoors in artificially heated spaces. In winter, especially when cold outside air is heated indoors, the humidity may drop as low as 10-20%. This low humidity can cause adverse health effects, by drying out mucous membranes such as the lining of the nose and throat, and can cause respiratory distress. The low humidity also can affect wooden furniture, causing shrinkage and loose joints or cracking of pieces. Books, papers, and art works may shrink or warp and become brittle in very low humidity. In addition, static electricity may become a problem in conditions of low humidity, destroying semiconductor devices and causing annoying static cling of textiles, and causing dust and small particles to stick stubbornly to electrically charged surfaces

• In accordance with industry standards, we do not evaluate humidifiers as part of our service. However, because warm moisture can promote the growth of bacteria, yeasts, and molds, their reservoirs must be kept clean when in use, and desalinated and serviced when they are not in use. Humidifiers are infamous for leaks. Maintain the system. Clean humidifier two or three times during the winter season.

## Observations:

• Humidity: How Much Is Too Much, How Much is Too Little? Experts have developed rules of thumb to help homeowners make decisions regarding humidity levels in their house. The limits should be used as guides only. Acceptable or comfortable humidity levels will actually vary from season to season, from house to house, and even between rooms in the same house. Rules of Thumb: To prevent window condensation during the heating season, the recommended indoor RH is 30 per cent to 50 per cent. When it is below -10°C (14°F) outdoors, recommended indoor RH is 30 per cent. Taking Action: Humidity can be controlled. If the relative humidity in your home is too high, you can reduce it; if it is too low, you can increase it. In summer, you can reduce house humidity levels by the use of a dehumidifier (see the About Your House fact sheet Choosing a Dehumidifier) or by running an air conditioner. In winter, a house that is too wet usually has some high moisture sources (for example, a damp basement, roof leaks, many plants). Deal with these problems first. If high humidity persists, you may need to make simple changes in your family's habits, such as remembering to open or close doors or windows. Or, you can install equipment, such as exhaust fans in bathrooms or a heat recovery ventilator (**HRV**), to remove excess humidity. Very low indoor RH levels in the winter may result from cold, dry air leaking in from outside. In this case, sealing up the house by weatherstripping and caulking will improve humidity conditions indoors and may reduce your heating bills at the same time. If low humidity problems persist, despite airtightening the house, consider the use of a humidifier. Humidifiers — both stand-alone humidifiers and humidifiers attached to your furnace — will increase indoor RH levels. But if they are not installed, used and maintained properly, they can also be sources of excess moisture and mold in your home. Final Analysis: Humidity levels in your home can be too high or too low. In either case, problems can result. A hygrometer can provide the information you need to determine whether you have a humidity problem — but it must be accurate to be useful. If you have a humidity problem, it can usually be controlled.

- Leaks at solenoid valve. Water shutoff valve closed to prevent further water damage
- Humidifier duct has separated. To be repaired



Humidifier



Leak



Duct separated

5. Combustion air

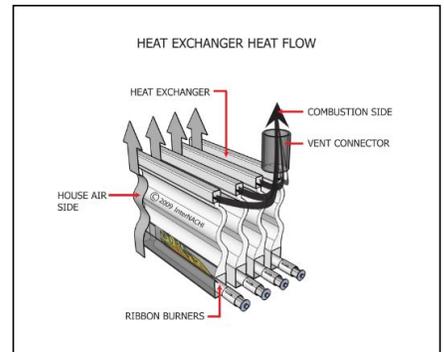
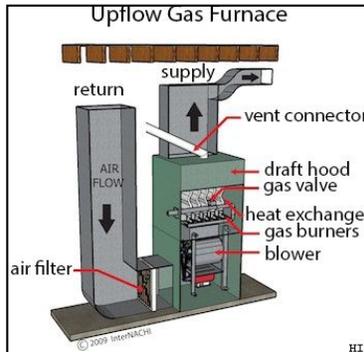
fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Combustion air vent present

6. Heating Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Upflow gas furnace diagram.
- The furnace is functional. However, it is beyond the commonly accepted design life of twenty years, and will need to be monitored more closely for evidence of metal fatigue. You may wish to have the complete heat exchanger inspected for cracks by a furnace contractor.



# Home Heating Safety

We all need heat to keep our homes warm and comfortable in the winter. However, the equipment we use to heat our homes can be dangerous if it is not designed, installed, used and maintained properly. Follow these safety tips to prevent fire and other hazards when heating your home.

## All heating equipment

- Buy appliances certified by a recognized testing agency, such as the Canadian Standards Association (CSA), Intertek Testing Services (ITS), or Underwriters' Laboratories of Canada (ULC). Certified appliances will be marked with the symbol of the testing agency.
- Always follow manufacturer's instructions when installing and operating equipment.
- Supervise children when they are in the room with heating equipment. If possible, keep children away from heating equipment.

## Furnaces and water heaters

- The pilot flame can ignite flammable liquid vapours, so keep flammable liquids and chemicals (gasoline, solvents etc.) away from furnaces and water heaters.
- Have your furnace inspected once a year by a qualified heating contractor.

## Space heaters

- Keep the area around space heaters clear. There should be at least one metre (three feet) of clear space in all directions around a space heater.
- Make sure that blankets, clothes, or other combustible materials are not in a position to fall on or near a space heater.
- Areas surrounding space heaters should not become too hot to touch.
- Don't put clothes on or near a space heater to dry.
- Use only the fuel for which the heater was designed.
- Inspect cords on electrical heaters. If cords are frayed or split, or overheat during operation, the unit is a fire hazard.

## Wood and coal stoves and heaters

- Use only the fuel for which the stove or heater was designed. Don't use flammable/combustible liquids to start a fire.
- Make sure the stove or heater is installed at least one metre (three feet) away from the wall.
- Place an approved stove board under the stove or heater to protect the floor from heat and hot coals.

## Fireplaces

- Have your chimney checked and cleaned each year by a qualified person.
- Always supervise a fire. Make sure a fire is completely out before leaving the house or going to bed.
- Use small amounts of dry, well-seasoned wood. Don't burn scrap paper, Christmas trees or other waste in the fireplace.

## Carbon monoxide

All fuel-burning appliances need a supply of fresh air to burn properly. Without proper ventilation, fuel burning heating equipment could produce carbon monoxide, a poisonous gas. Check that all appliances have vents to the outside. For more information about carbon monoxide, see Alberta Municipal Affairs' Safety Tips for Carbon Monoxide.

For more information, please call 1-866-421-6929 or visit [www.municipalaffairs.alberta.ca](http://www.municipalaffairs.alberta.ca).



## Water Heater

There are a wide variety of residential water heaters that range in capacity from fifteen to one hundred gallons. They can be expected to last at least as long as their warranty, or from five to ten years, but they could last longer. However, few of them last longer than fifteen or twenty years and many eventually leak. So it is always wise to have them installed over a drain pan plumbed to the exterior. Also, it is prudent to flush them annually to remove minerals that include the calcium chloride biproducts of many water softening systems. The water temperature should be set at a minimum of 110 degrees Fahrenheit to kill microbes and a maximum of 140 degrees to prevent scalding. Also, water heaters can be dangerous if they are not seismically secured and equipped with either a pressure/temperature relief valve or a Watts 210 gas shutoff valve.

**What maintenance is required for the water heater?** A visual inspection on the water heater for rust and deterioration generally indicates sometime type of leak and should be attended to. Drain your water heater annually to help prevent build up of scale inside the heater. Some people purge their water heaters periodically. Purging consists of opening the valve at the bottom of the heater to flush out accumulated sediment that can impair the heating element's function. There are two schools of thought in regard to purging. The first is that purging is beneficial as it prevents accumulated sediment deposits from impairing heating element efficiency. If you do decide to purge the tank periodically, purging the equivalent of a pail of water is all that's needed. The other school claims that moderate amounts of sediment deposits on the bottom of the tank protect it from corrosion caused leakages, so purging will hasten the tanks demise. One thing is certain, if you haven't been purging your tank regularly from the very beginning don't start now, as there's a very good chance that the tank will spring leaks in a short time. If you do purge, never forget to switch off the water heater breaker in the electrical box before proceeding. If you have any doubt, consult with a professional. As mentioned previously, there is a magnesium anode installed inside the storage tank to prevent tank corrosion. Although tanks are glass lined, it's very difficult to apply this enameling in a manner that's absolutely guaranteed to protect the underlying steel of the tank. Because water can be corrosive, it will ultimately locate a weak point in the system (i.e. near the heating elements) and attack. The tank will begin to corrode and eventually spring leaks. Anode life is determined by the amount and type of minerals present in your water. If you're on a municipal water system, the water is usually less mineralized and the anode can last five to seven years or

even more. On the other hand, if your water comes from a surface or artesian well and there are moderate to high concentrations of such minerals as iron, manganese or sulphur, your anode can be "sacrificed" in but one year. Also note that your water softener is doing nothing to solve this problem. On the contrary, since it's adding salt to your water, its actually contributing to the accelerated corrosion of the tank. Water softening and corrosion prevention are two items that must be dealt with separately and it's wise to read the heater manufacturer's guarantee conditions when it comes to water softeners. On the positive side, the anode can be replaced on most water heaters without too much trouble or expense, although you may have to enlist the services of a plumber. Consult your owner's manual for more details, but in all circumstances make sure you shut off both the heaters water and electrical supplies and release the pressure before proceeding with even the most cursory maintenance or repair.

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## 1. Water Heater

Type: Continuous Flow Gas Water Heaters. Gas Continuous Flow water heaters heat water continuously on demand, giving hot water that 'never runs out' as long as water keeps flowing. They are ideal where there are not a large number of hot water demands at once but many at different times (such as many people having showers one after the other). They are compact and come in varied capacities to suit small or large homes. Available in 50C or 60C temperature models, they can have remote temperature controllers fitted enabling you to set the hot water temperature. They are typically 5 Star energy efficient, but models up to 7 Star equivalent are also available, as are Indoor models (which require a flue). They need a power point as well as gas supply (which will need to be a larger pipe than for a Gas Storage water heater).

### 2. Temperature Pressure Release Valve Conditions

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 3. Drain

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

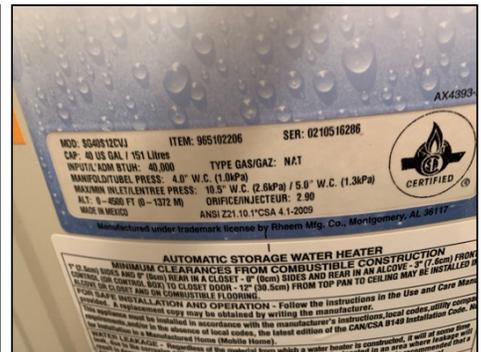
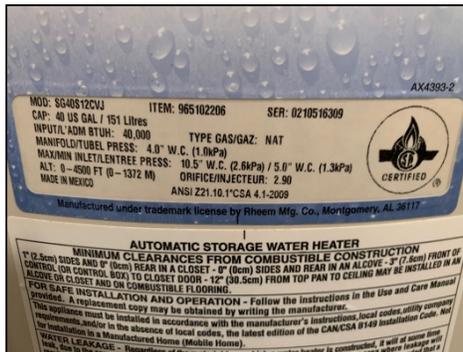
### 4. Water Heater Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Water heater appears to be older than the life expectancy of 10 years. Serviceable at time of inspection. No warranties can be offered on this or any other appliance.
- Two heaters in tandem is functional



2010 models



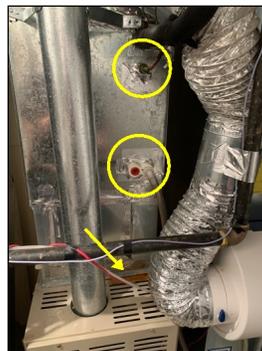
## Air Conditioning

### 1. Air Conditioning Comments

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Type: Split System

- Air conditioning not inspected due to outside temperature. Activating air conditioning during cool/cold weather can cause serious damage to the system. Inquire about the condition to the home owner
- Rust stains on the furnace from the air conditioner lines. Repair leaks as required to prevent further water damage



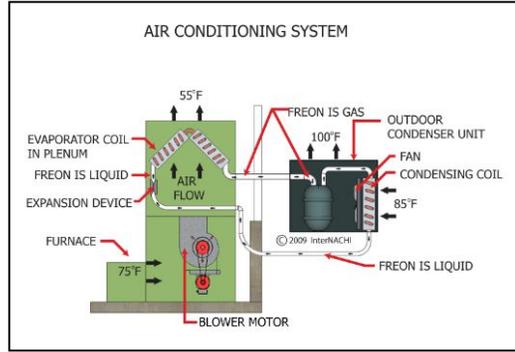
AC plumbing leak stains



Rust on Furnace



Rust inside furnace



## Laundry

In accordance with industry standards we do not test clothes dryers nor washing machines and their water connections and drain pipes. The water supply to washing machines is usually left on, and their hoses can leak or burst under pressure and continue to flow. Therefore, we recommend replacing the rubber hose type with newer braided stainless steel ones that are much more dependable. You should also be aware that the newer washing machines discharge a greater volume of water than many of the older drainpipes can handle, which causes the water to back up and overflow, and the only remedy would be to replace the standpipe and trap with one that is a size larger. Faulty dryer vents have been responsible for thousands of fires, hundreds of injuries, and even deaths. The best vents are a smooth walled metal type that travels a short distance; all other types should be regarded as suspect, and should be inspected bi-annually to ensure that they do not contain trapped lint or moisture.

### 1. Washer Hook-ups

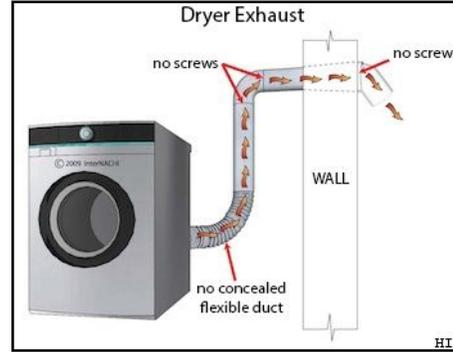
fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



### 2. Dryer Hook-ups

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Information: Faulty dryer vents have been responsible for thousands of fires, hundreds of injuries, and even deaths. The best vents are a smooth-walled metal type that travels a short distance; all other types should be regarded as suspect, and should be inspected bi-annually to ensure that they do not contain trapped lint or moisture.



### 3. Laundry Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Laundry room is in acceptable condition



## Living Room

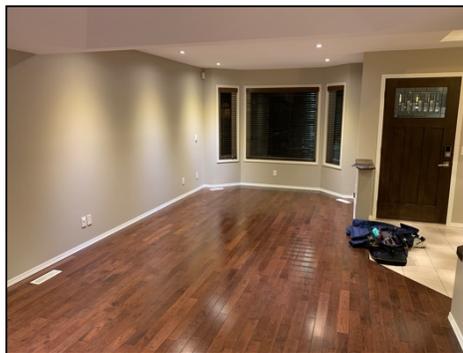
### 1. Electrical Conditions

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 2. Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Living room is in acceptable condition



# Family Room

## 1. Electrical Conditions

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 2. Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Family room is in acceptable condition



# Fireplace

## 1. Fireplace Location

The fireplace is located in the Basement

The fireplace is located in the Family Room.

## 2. Fireplace Style

Gas Direct vent. It can only be assumed that this appliance was installed to manufacturer's specifications. A direct vent fireplace has a completely sealed combustion chamber which allows it to vent directly out a side wall or through the ceiling of your home. The benefit of this system is that it brings in air from the outside of the home rather than using the room air.

Regency direct vent fireplaces use a co-axial venting system. The co-axial vent system has the exhaust pipe within the air intake pipe which protects any surrounding combustible material from the high temperature of the flue gases as well as preheating the outside air prior to it being introduced to the combustion process

## 3. Fireplace Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- The fireplace responded to the control



Master bedroom. Thermostat controlled



## Kitchen

We test kitchen appliances for their functionality, and cannot evaluate them for their performance nor for the variety of their settings or cycles. However, if they are older than ten years, they may well exhibit decreased efficiency. Also, many older gas and electric ranges are not secured and can be easily tipped, particularly when any weight is applied to an open range door, and all such appliances should be confirmed to be secure. Regardless, we do not inspect the following items: free standing appliances, refrigerators, trash compactors, built in toasters, coffee makers, can openers, blenders, instant hot water dispensers, water purifiers, barbecues, grills or rotisserie, timers, clocks, thermostats, the self cleaning capability of ovens, microwaves and concealed or countertop lighting, which is convenient but often installed after the initial construction and not wired to national electrical standards.

The kitchen sink and dishwasher tend to be the most used plumbing appliances in the house and can require the most maintenance. Under the sink, you will see hot and cold waterlines connected to the tap and a hot waterline connecting the dishwasher. The dishwasher will connect to the drain below the sink using a flexible hose. If a garburator is installed, it will be connect to the bottom of the sink and then run through the P trap. **When using the garburator, how long should I let the water run after switching it off?** Generally, that depends on the type of material you're putting in the garburator. A rule of thumb is five to ten seconds to ensure the material is carried through the drain.

**What is the little chrome cylinder located at the shut off for?** These cylinders are water hammer arrestors. You will also find them on the laundry box that the clothes washer is connecting to. They are designed to absorb the hammering affect water can have when turned off suddenly by the solenoid valve. **If the sink starts draining slowly, can I fix that myself?** The P trap under the sink can be disassembled for cleaning. There are threaded unions to service the drain.

**1. Kitchen Floor Condition**

fair	review often	repair	not visible	safety	Wood
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Scratched hardwood floor evident

**2. Kitchen Electrical Condition**

fair	review often	repair	not visible	safety	• GFCI protected receptacles may not have been required when the house was built. Recommend that all of the countertop outlets be upgraded to have ground fault protection, which is mandated by current standards and is an important safety feature. Receptacles within 1.5 m of sinks (wash basins complete with drain pipe) shall be protected by a ground fault circuit interrupter.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



**3. Kitchen Cabinet Condition**

fair	review often	repair	not visible	safety	• The floor of the sink cabinet is damaged, and should be replaced. Mold like substance evident. Floor space underneath may be contaminated and damaged
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



Mold like substance

**4. Kitchen Counter Top Condition**

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 5. Kitchen Sink Condition

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Metal

• Sink is loose, suggest securing and seal as necessary. Held up by pieces of wood



Loose sink



### 6. Kitchen Faucets

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 7. Traps/Drains/Supply Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 8. Stove Cooktop Conditions

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Type: Gas

• Responded to controls



### 9. Garbage Disposal

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Observations:  
 • Responded to switch

### 10. Dishwasher Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Dishwasher was operational at the time of inspection. Dishwashers most commonly fail internally at the pump, motor or seals. We do not disassemble these units to inspect these components. We recommend you operate this unit prior to closing.

### 11. Hood Fan Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Style: Exterior Vented  
 • Fan responded to switch  
 • Vent louvres missing on the exterior wall

### 12. Microwave

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Observations:  
 • Microwave connected to an outlet mounted to the exhaust fan cover.  
 Electrician to advise for proper installation to meet current requirements



### 13. Kitchen Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Kitchen is in acceptable condition  
 • We do not test appliances as part of our service. We test kitchen appliances for their functionality, and cannot evaluate them for their performance nor for the variety of their settings or cycles  
 • Water filtration, water softening or other treatment systems and equipment should be evaluated and serviced by the original installers and manufacturers' agents.



### Guest Bathroom

#### 1. Electrical Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• GFCI in place and operational

#### 2. Bathroom Exhaust Fan Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3. Sink Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 4. Toilet Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 5. Bathroom Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Bathroom is in acceptable condition



### Main Bathroom

#### 1. Bathroom Location

Second Floor Common Bathroom

#### 2. Electrical Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• GFCI in place and operational

#### 3. Tub/Shower

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 4. Sink Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 5. Toilet Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 6. Bathroom Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Bathroom is in acceptable condition



## Onsuite Bathroom

### 1. Bathroom Floor Conditions

fair	review often	repair	not visible	safety
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Materials: Ceramic Tile

Observations:

- Damaged grout observed, suggest re-grouting as necessary.
- Loose tiles evident. Normally the cause of inadequate sub floor



Loose tiles



Seal corners

### 2. Electrical Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- GFCI in place and operational
- GFCI in this bathroom resets other bathroom receptacles

### 3. Tub/Whirlpool Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Type Whirlpool tub

- Whirlpool tub observed. Tub was filled to a level above the water jets and operated to check intake and jets. The tub was then drained to check for leaks and/or damage. Pump and supply lines were not completely visible or accessible. GFCI's were present and was tested. The items tested appeared to be in serviceable condition. If a more detailed report is desired, the client is advised to consult a licensed plumber for a complete review prior to closing.
- Debris was ejected from the jets during operation, recommend having circulation system professionally cleaned prior to use.



### 4. Shower Surround Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 5. Shower Fixtures

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 6. Sink Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 7. Traps/Drains/Supply Condition

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 8. Bathroom Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Bathroom is in acceptable condition



# Bedrooms

The main area of inspection in the bedrooms is the structural system. This means that all walls, ceilings and floors will be inspected. Doors and windows will also be investigated for damage and normal operation. Personal items in the bedroom may prevent all areas to be inspected as the inspector will not move personal items.

## 1. Door Conditions

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• All doors are short. Bottom seals found installed



Upper level doors are short

## 2. Comments

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Bedrooms are in acceptable condition





## General Interior Areas

**General:** Cosmetic imperfections throughout the house that is readily apparent, and which we will not necessarily identify or comment on. When the residence is furnished, then in accordance with industry standards we only inspect those surfaces that are exposed and readily accessible. We do not move furniture, lift carpets, nor remove or rearrange items within closets and cabinets. The Interior section covers areas of the house that are not considered part of the Bathrooms, Bedrooms, Kitchen or areas covered elsewhere in the report. Interior areas usually consist of hallways, foyer, and other open areas. Within these areas the inspector is performing a visual inspection and will report visible damage, wear and tear, and moisture problems if seen. Personal items in the structure may prevent the inspector from viewing all areas on the interior. The inspector does not usually test for mold or other hazardous materials. A qualified expert should be consulted if you would like further testing.

The importance of kitchen and bathroom fans: Bathroom and kitchen fans are an important part of your home's ventilation system. They remove odours from your house, which improves indoor air quality. They also remove moisture, which decreases the level of humidity in your house. High humidity can damage building materials and can cause mold growth. Mold may affect your family's health. The importance of running the ventilation system: Ventilation is not as critical when the house is unoccupied, although some houses require ongoing mechanical ventilation to keep the windows from fogging up in winter and to prevent the subsequent damage to window frames, trim and walls. It is especially important to have high ventilation rates for: The first fall and winter for a new house, to get rid of construction moisture. Houses with high numbers of occupants, either temporary or permanent.

Houses in which renovation activities (drywalling, painting, floor re-finishing and so on) or new furniture may be creating high concentrations of pollutants. Houses in which bedroom doors are generally closed during sleeping hours. Open doors help ensure that the bedroom air has the same quality as the air in the rest of the house. Closed-door bedrooms require higher ventilation rates or good distribution systems. Houses whose residents have respiratory problems (people allergic to outdoor pollutants require filtered outdoor air). Fire and smoke detection information: Smoke alarms are required on all floors of a residence and near bedrooms. Although most smoke alarms are wired

directly to the electrical panel in newly constructed houses, some jurisdictions permit battery-powered alarms in existing construction. It is prudent to install a carbon monoxide (CO) detector near a fuel-fired appliance, such as a fireplace or furnace, and near a doorway to an attached garage. NOTE: We do not evaluate smoke and CO detectors as part of our service. We do not turn on any utilities that are off/closed.

**Gas leaks:** Gas leaks in your home are usually the result of poorly installed, badly maintained or faulty gas appliances. The most obvious sign of a leak is the smell of gas in your home. A pungent, rotten egg odour is added to natural gas so it can be detected in the case of a leak. There are also particular physical symptoms you may suffer from if there is a leak. If you are feeling lightheaded, ill, dizzy or nauseous you should go outside immediately. If the symptoms go away in the fresh air you could be feeling the effects of a gas leak or carbon monoxide poisoning. If you smell gas inside your home leave the building immediately, leave lights and appliances alone and call **ATCO Gas** or 911 once you are outside. If you smell gas outside a building call **ATCO Gas** or 911 immediately, keep people away from the area and do not smoke or light any flames.

**1. Floor Condition**

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Hardwood floor is scratched and some wear marks evident

**2. Window Condition**

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Thermopane windows observed in the home. The inspector is unable to determine if all double glazed insulated windows in this property are completely intact and without compromised seals. Conditions indicating a broken seal are not always visible or present and may not be apparent or visible at the time of inspection. Changing conditions such as temperature, humidity, and lighting limit the ability of the inspector to visually review these windows for broken seals. For more complete information on the condition of all double glazed windows, consult the seller prior to closing.

**3. Electrical Conditions**

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• All visible outlets tested serviceable on the main/upper level

**4. Wet Bar Conditions**

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Basement

**5. Interior Area Comments**

fair	review often	repair	not visible	safety
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Minor cosmetic issues are not within the scope of this inspection as it focuses on basic structure and major systems only.  
 • Central vacuum system motor has been removed

# Conclusion

Thank you for hiring me as your inspector. In as much as we never know who will be occupying or visiting a property, whether it be children or the elderly, we ask you to consider following these general safety recommendations: install smoke and carbon monoxide detectors; identify all escape and rescue ports; rehearse an emergency evacuation of the home; upgrade older electrical systems by at least adding GFCI (ground fault circuit interrupter) outlets; never service any electrical equipment without first disconnecting its power source; safety film all non tempered glass; ensure that every elevated window and the railings of stairs, landings, balconies, and decks are child safe, meaning that barriers are in place or that the distance between the rails is not wider than three inches; regulate the temperature of water heaters to prevent scalding; make sure that goods that contain caustic or poisonous compounds, such as bleach, drain cleaners, and nail polish removers be stored where small children cannot reach them; ensure that all garage doors are well balanced and have a safety device, particularly if they are the heavy wooden type; remove any double cylinder deadbolts from exterior doors; and consider installing child safe locks and alarms on the exterior doors of all pool and spa properties. We are proud of our service, and trust that you will be happy with the quality of our report.

We have made every effort to provide you with an accurate assessment of the condition of the property and its components and to alert you to any significant defects or adverse conditions. However, we may not have tested every outlet, and opened every window and door, or identified every minor defect. Also because we are not specialists or because our inspection is essentially visual, latent defects could exist. Therefore, you should not regard our inspection as conferring a guarantee or warranty. It does not. It is simply a report on the general condition of a particular property at a given point in time. (Dear Client): There may come a time that you discover something wrong with the house, and you may be upset or disappointed with your home inspection. There are some things we'd like you to keep in mind. Intermittent or Concealed Problems: Some problems can only be discovered by living in a house. They cannot be discovered during the few hours of a home inspection. For example, some shower stalls leak when people are in the shower, but do not leak when you simply turn on the tap. Some roofs and basements only leak when specific conditions exist. Some problems will only be discovered when carpets are lifted, furniture is moved or finishes are removed. No Clues: These problems may have existed at the time of the inspection but there were no clues as to their existence.

Our inspections are based on the past performance of the property. If there are no clues of a past problem, it is unfair to assume we should foresee a future problem. We Always Miss Some Minor Things. Some say we are inconsistent because our reports identify some minor problems but not others. The minor problems that are identified were discovered while looking for more significant problems. We note them simply as a courtesy. The intent of the inspection is not to find the \$200 problems; it is to find the \$2,000 problems. These are the things that affect people's decisions to purchase. Contractors' Advice: A common source of dissatisfaction with home inspectors comes from comments made by contractors. Contractors' opinions often differ from ours. Don't be surprised

when three roofers all say the roof needs replacement when we said that the roof would last a few more years with some minor repairs. Last Man in Theory. While our advice represents the most prudent thing to do, many contractors are reluctant to undertake these repairs. This is because of the Last Man in Theory.

The contractor fears that if he is the last person to work on the roof, he will get blamed if the roof leaks, regardless of whether or not the roof leak is his fault. Consequently, he won't want to do a minor repair with high liability when he could re-roof the entire house for more money and reduce the likelihood of a callback. This is understandable. Most Recent Advice Is Best: There is more to the Last Man in Theory. It suggests that it is human nature for homeowners to believe the last bit of "expert" advice they receive, even if it is contrary to previous advice. As home inspectors, we unfortunately find ourselves in the position of "first man in" and consequently it is our advice that is often disbelieved. Why Didn't We See It?

Contractors may say, "I can't believe you had this house inspected, and they didn't find this problem."

There are several reasons for these apparent oversights: Conditions During Inspection: It is difficult for homeowners to remember the circumstances in the house at the time of the inspection.

Homeowners seldom remember that it was snowing, there was storage everywhere or that the furnace could not be turned on because the air conditioning was operating, et cetera. It's impossible for contractors to know what the circumstances were when the inspection was performed. The Wisdom of Hindsight: When the problem manifests itself, it is very easy to have 20/20 hindsight. Anybody can say that the basement is wet when there are two inches of water on the floor.

Predicting the problem is a different story. A Long Look: If we spent half an hour under the kitchen sink or 45 minutes disassembling the furnace, we'd find more problems too. Unfortunately, the inspection would take several days and would cost considerably more. We're Generalists: We are generalists, we are not specialists. The heating contractor may indeed have more heating expertise than we do. This is because we are expected to have heating expertise and plumbing expertise, structural expertise, electrical expertise, et cetera. Invasive Look: Problems often become apparent when carpets or plaster are removed, when fixtures or cabinets are pulled out, and so on. A home inspection is a visual examination. We don't perform any invasive or destructive tests. Not Insurance: In conclusion, a home inspection is designed to better your odds. It is not designed to eliminate all risk. For that reason, a home inspection should not be considered an insurance policy. The premium that an insurance company would have to charge for a policy with no deductible, no limit and an indefinite policy period would be considerably more than the fee we charge. It would also not include the value added by the inspection. We hope this is food for thought. Furthermore, as a homeowner, you should expect problems to occur. Roofs will leak, drain lines will become blocked, and components and systems will fail without warning. For these reasons, you should take into consideration the age of the house and its components and keep a comprehensive insurance policy current. If you have been provided with a home protection policy, read it carefully. Such policies usually only cover insignificant costs, such as that of roofer service, and the representatives of some insurance companies can be expected to deny coverage on the grounds that a given condition was

preexisting or not covered because of what they claim to be a code violation or a manufactures defect. Therefore, you should read such policies very carefully.

Thank you for taking the time to read this report, and call us if you have any questions or observations whatsoever. We are always attempting to improve the quality of our service and our report, and we will continue to adhere to the highest standards of the real estate industry and to treat everyone with kindness, courtesy, and respect.

## Glossary

Term	Definition
ABS	Acronym for acrylonitrile butadiene styrene; rigid black plastic pipe used only for drain lines.
AFCI	Arc-fault circuit interrupter: A device intended to provide protection from the effects of arc faults by recognizing characteristics unique to arcing and by functioning to de-energize the circuit when an arc fault is detected.
Accessible	available for unobstructed viewing, touching, examination, or operation through normal user operated controls without the need to dismantle, climb, move objects, or any other action that could result in damage to property or injury to people
CU	Copper (wiring)
Combustion Air	The ductwork installed to bring fresh outside air to the furnace and/or hot water heater. Normally, two separate supplies of air are brought in: one high and one low.
Component	a physical part that comprises part of a home's system (e.g., a floor beam is a component of the overall floor system).
GFCI	A special device that is intended for the protection of personnel by de-energizing a circuit, capable of opening the circuit when even a small amount of current is flowing through the grounding system.
HRV	Heat recovery ventilation, also known as HRV, mechanical ventilation heat recovery, or MVHR, is an energy recovery ventilation system using equipment known as a heat recovery ventilator, heat exchanger, air exchanger, or air-to-air heat exchanger which employs a counter-flow heat exchanger (countercurrent heat exchange) between the inbound and outbound air flow.[1] HRV provides fresh air and improved climate control, while also saving energy by reducing heating (and cooling) requirements.
HVAC	heating, ventilation, air conditioning
Operation	use of normal operating controls
PVC	Polyvinyl chloride, which is used in the manufacture of white plastic pipe typically used for water supply lines.
Repair	Repair or replace to solve the problem
Safety	The condition of being protected from or unlikely to cause danger, risk or injury
System	an overall set of material components used together to perform a particular function in a home.
Valley Flashing	Sheet metal or other material used to line a valley in a roof to direct rainwater down into the gutter system.

backfill	The slope of the ground adjacent to a house. The replacement of excavated earth into a previously excavated area, such as a trench around and against a basement foundation. In carpentry, the process of fastening together two pieces of board by gluing blocks of wood in the interior angle
backflow preventer	A device or means to prevent backflow of contaminated water into the potable water supply.
evidence	That which tends to prove or disprove something; something that makes plain or clear; grounds for belief; proof
foundation	The base upon which the structure or wall rests, usually masonry, concrete or stone, and generally partially underground
function	The action for which an item, component or system is specially fitted or used, or for which an item, component or system exists; to be in action or perform a task
home inspection	The process by which an inspector visually examines the readily accessible systems and components of a home and operates those systems and components utilizing this Standards of Practice as a guideline
verify	To confirm or substantiate