

# Home Inspection Report

**123 First Street  
Avalon, NL  
Prepared for: Jane And John Smith**



**Prepared by: Rob Ashley**

**Ashley Home Inspections  
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# Ashley Home Inspections

709-743-1558

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## Table of Contents

<b>General Information</b>	7
<b>Roofing, Flashings and Chimneys</b>	11
<b>Exterior surfaces and elements</b>	18
<b>Foundation and Internal Structure</b>	26
<b>Electrical System</b>	32
<b>Heating</b>	38
<b>Insulation and Vapour Barriers</b>	42
<b>Plumbing</b>	45
<b>Interior</b>	52

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November 10, 2018

123 First Street  
Avalon, NL  
Jane and John Smith



Dear Jane and John:

At your request a visual inspection of the above referenced property was conducted on 11/10/2018 . This inspection report reflects the visual conditions of the property at the time of the inspection only. Hidden or concealed defects cannot be included in this report. No warranty is either expressed or implied. This report is not an insurance policy, nor a warranty service.

An earnest effort was made on your behalf to discover all visible defects, however, in the event of an oversight, maximum liability must be limited to the fee paid. The following is an opinion report, expressed as a result of the inspection. Please take time to review limitations contained in the inspection agreement.

## REPORT SUMMARY

These **optional** summary pages detail the most significant problems or deficiencies found during the inspection today. **These items may be prioritized due fire or safety issues for example. The problems or deficiencies may not always have a major cost to correct.**

It is not a comprehensive list of all defects and items on it, should not be considered to be in particular order or priority. It must not be relied upon in isolation. You must read the entire text of this report thoroughly, before proceeding with your transaction. Only in this way will you gain a proper and adequate appreciation for the condition of the building.

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### Exterior surfaces and elements

#### Conditions

##### *Gutters and downspouts:*

Installation of gutters and downspouts is recommended at left and right side. to reduce risk of water seepage to basement. see info. Recommend installing downspout extensions to discharge water 4 to 6 feet from foundations or to a distance that the water flows away from house to reduce risk of seepage into basement. Common (see info)

##### *Grading near house/garage:*

Re-grading soil at foundation in some areas is recommended to ensure positive slope away from building to help direct water away from foundation, reducing risk of water seepage to basement( poor grading is common). see info.

##### *Walls:*

Common cracks and holes noted on siding. Repairs are recommended to protect structure from damaging weather. Recommend ensuring all penetrations are sealed as regular maintenance to prevent damaging water seepage.

##### *Driveways:*

The pavement(appears newer) of the driveway extends past the lower city concrete curb. This poses a trip and vehicle damage hazard. Recommend cutting curb flush with driveway for safety and to prevent cost related vehicle damage.

##### *Walkways:*

Asphalt walk slopes towards the foundation at the left side and is higher than the wall siding at wall step. This will increase risk of seepage to the basement and cause possible damage to the wall structure from water wicking. Recommend repair to ensure adequate slope away from house and provide adequate distance from walk to siding. Typically minimum of six to eight inches. Concealed damage may exist.

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## *Decks, steps:*

Poor flashing detail at side of deck at ledger board. This will likely allow water entry inside wall. Concealed damage may exist. Correction/ repair recommended. Fasteners used to attach joist hangers(supporting floor joists) do not appear designed for that purpose(wood screws apparent)and may fail. Recommend replacing with joist hanger nails for safety.

## *Windows:*

Soft areas on two wood basement windows(rot) at left side. Recommend replacement to prevent further damage/ reduce risk of water entry causing damage to the interior.

## *Doors:*

Rot noted at basement walkout door. Replacement is recommended to prevent further damage to door and wood structure( concealed damage may exist)(most attempts to repair door frames/ trim tend to fail over a short period of time). Minor rust noted on front door.

## **Electrical System**

### Conditions

#### *Service entrance:*

Sheathing on neutral wire at mast is deteriorating This has become a common issue with this age of home. Correction is recommended to prevent a life safety issue/ shock hazard. Replacing neutral wire from service drop to the meter base is a typical correction. Recommend having a qualified electrician review for remedial repair/ correction.

#### *Main panel:*

Double taps noted( X2). (two circuits to one breaker), Recommend qualified electrician review/ correct as required to prevent possible nuisance tripping of breakers/ fire hazard. Minor rust noted at base of panel, no moisture at time of inspection. No water damage observed. Monitor, seal exterior as required. No room for additional circuits. Upgrading size of panel or installing sub panel will be required if additional circuits required. Ie: adding heat source in laundry rooms and bathroom. To correct double taps.

#### *Branch circuits:*

Recommend properly terminating branch circuit in room with water heater and by main electrical panel( provide junction box for safety/ (prevent fire hazard). Some poorly supported circuits by main panel. Recommend having electrician review/ correct as required for safety.

#### *Switches/receptacles*

Basement family room, mudroom and hall areas have limited wall receptacles. This would indicate that permits were likely not obtained for basement electrical. More outlets are recommended to reduce the use of extension cords and splitters. Recommend having a qualified electrician review and correct as required.

#### *Lights:*

Pot lights over basement jet tub is a safety issue due to possible contact with water. Recommend installation of approved lights for area. No light switch located at top of stairs. Installation of 3 way switch for stairs recommended for safety as required. Recommend electrician review correct as required.

## **Heating**

### Conditions

#### *Electric baseboard/fan heaters:*

No heat source in main floor bath at rear main laundry room at basement laundry . This is a comfort issue and will increase risk of pipes freezing near exterior walls. Heat source is required typically all rooms on exterior walls. Heater in rear porch area would not operate. Recommend having electrician review/ correct as required.

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## Insulation and Vapour Barriers

### Basement

#### *Insulation:*

Exposed foam insulation(common) Fire/ health hazard if burning. Recommend covering or remove(see info). Typically framing and insulation is installed in front of foam insulation when finishing walls/ basement. Insurance may be an issue if left exposed.

## Plumbing

### Conditions

#### *Supply piping in house:*

Risk of freezing noted in areas. Supply should not be ran in exterior walls. Noted at bar sink. Laundry is above bar sink drain. Although not viewed the bar sink likely drains into the washer drain cleanout. This configuration is typically not acceptable and may cause venting issues and potential waste backup into bar sink. Recommend qualified plumber review for remedial correction.

#### *Waste pipes:*

Risk of freezing in areas. Should not be place in exterior walls. S trap noted at main vaniti indicate poor venting of waste system. May cause siphoning of water in trap, which could allow sewer gases into house(potential health hazard). Water appeared to drain adequately. Monitor or consult with a plumber for improvements.

#### *Whirlpool tub:*

Filled and ran. A wall switch is only in place. If no air switch is located at tub a wall timer is typically required for safety. Recommend having electrician review and correct as required. Did not determine if jet tub was on a dedicated electrical circuit as required. Have electrician confirm to ensure against nuisance breaker tripping due to overloaded circuit( fridge also appears to be moved from original and is likely no longer on dedicated circuit).

## Interior

### Conditions

#### *Floors:*

Minor gaps noted on wood flooring(possibly water damage) at right exterior wall in basement family room. No elevated levels of moisture detected. Monitor or consult with owner on possible cause.

#### *Ceilings:*

Water damage(apparent). Minor stain/ loose stipple noted on kitchen ceiling. No moisture detected, monitor, consult with owner or have contractor review for further evaluation(see roof re: large tar patch above area). Repairs to stipple ceiling are typically difficult to perform cosmetically without removing stipple or spraying over entire ceiling. Recommend consulting with a contractor for further evaluation.

### Stairs

#### *Stairs:*

Door opens over stairs, safety hazard( typical for walkout door). Handrails recommended at walkout stairs for safety. Stair rise not uniform, potential trip hazard.

#### *Basement/crawl space water penetration:*

Damp odor detected. Higher than normal moisture levels(8 to 14% would be considered normal) in sub floor. 20 to 35% moisture detected. This would indicate seepage from grade surface water. Concealed damage may exist. Odors from dampness may be difficult to remove without replacing sub flooring. Concealed water damage or potential mould/ mildew( potential health concern)may exist. Odors from dampness may be difficult to remove without replacing sub flooring.

#### *Leakage/dampness noted at:*

Left side front room in basement. See below(exterior re: walks, gutters and grading)for improvements or have basement leak specialist/ restoration contractor review for remedial correction/ repair. Installation of gutters/ downspouts and proper extensions. Replacing(properly grading) asphalt walk at left side will likely correct seepage issue.

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*Leakage/potential in basement - attention to:*

1. If leaks or seepage exists or occurs in the future, correction is recommended in order below.
  1. Ensure adequate eaves trough(gutters), downspouts and proper downspout extensions are in place.
  2. Ensure there is proper drainage of water away from house, including proper soil grading and window wells with adequate drainage.
  3. Have qualified specialist seal/ repair all foundation cracks as required and monitor for movement and/or moisture entry.
  4. Perimeter drainage at footings, includes foundation wrap/ sealing foundation, sump pump/ systems.

If further evaluation is required (at your discretion) for items above or in the main report, it is recommend to obtain qualified/ licensed contractors. Obtain competitive estimates for these items.

Thank you for selecting our firm to do your pre-purchase home inspection. If you have any questions regarding the inspection report or the home, please feel free to call us.

Sincerely,  
Rob Ashley  
Ashley Home Inspection Agency  
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[rob@ashleyinspections.ca](mailto:rob@ashleyinspections.ca)  
[enclosure

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## General Information

### Site Information

**Property Address:** 123 First Street  
Avalon, NL.  
**Date:** 10/25/2018.  
**Time:** 08:45 AM.  
**Client Name & Address:** Jane And John Smith

**Email:** [rob@ashleyinspections.ca](mailto:rob@ashleyinspections.ca).  
**Company:** Hanlon Realty.  
**Style of house:** Bungalow.  
**Approx. age of building:** 23 years.  
**Weather Conditions:** Cloudy, Showers, Wet soil, +8c.

### Payment Information

**Total Due:** \$0.00.  
**Payment received in full:** Yes

**Inspector's Name:** Thank you for your prompt payment!  
Rob Ashley.  
**Signature of Inspector:** Rob Ashley.



**BE SURE TO READ THIS REPORT THOROUGHLY.**

The report is based on a visual examination of the accessible features of the property and reflects their condition on the day of the inspection.

It is not a guarantee, warranty or insurance against current or future defects. It is carried out in accordance with the Standards of Practice of the American and Canadian Associations of Home and Property Inspectors and the National Association of Certified Home Inspectors. (A.S.H.I., C.A.H.P.I., and N.A.C.H.I.)

It is not a building code, by-law or insurance inspection.

The client requests an inspection of property subject to the terms and conditions of the signed agreement shown on the following pages.

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## A message from the authors.....

The text in this reporting system and its inferred meanings are accurate to the best of our knowledge and belief, at the time of printing.

It is not a code reference manual nor a transcript of them, although some references made be made to current legislation that are mutually associated with current code and construction practices.

The changing nature of good building practice, building, electrical and plumbing codes ensure that this book is constantly evolving. We invite you to be part of that process.

Please send your comments, suggestions or observations to:

[inspectsupport@rogers.com](mailto:inspectsupport@rogers.com)

Fax (905) 868-9640

or to speak to us toll free at

1 - 800 - 659 - 9053

**Inspection Support Services Inc. accepts no responsibility for any matters arising from the use of this reporting system by others.**

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## To the Home Buyer

Inspection Support Services Inc. are suppliers of high quality reporting systems, training and other related documentation. **We have no input into the on site home inspection process.** Please direct any questions you may have about the report and its contents, to your home inspector or his company. If any item is unclear, you should request the inspector to provide clarification. The standards of practice establish a minimum uniform standard for the home inspectors to comply with and for the clients awareness that outlines the scope of a home inspection. Ask the inspector for a copy of these Standards.

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## What happens if there's a problem

A home inspection is intended to help reduce your risk in buying a home. The primary purpose is to identify significant issues and deficiencies, and does not focus on cosmetic concerns. It is not a guarantee, warranty or insurance of any existing or future conditions.

Inevitably, there are times when things go wrong. Some defects may have been hidden (by storage or furniture for instance) at the time of the inspection or may not reveal themselves until you have lived in the house for a while. A shower for instance, may leak only after the water has been running for several minutes or a basement may only let water in during certain weather conditions, such as heavy downpour or at specific times of the year.

Often there are historical clues to previous or potential problems - stains on walls and ceilings, rotting cabinets, poor drainage and so on. However, in the absence of such clues or where they are hidden in some way - by decorations, storage or paneling for instance - future or even existing problems may be impossible to identify or predict.

It is our policy to re-inspect and discuss with you, all significant problems. Please feel free to call at any time.



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We do not quote prices for repairs. Some may argue that the buyer needs this sort of information to make an informed decision and balanced judgment and it precisely for that reason that our policy exists. Most home inspectors can quote a price range for works however, when the range spans several thousand dollars, it creates an opportunity for argument and conflict. In any circumstances where the repairs required are significant enough for buyer and seller to be concerned, we recommend that you obtain at least two written quotes from qualified contractors. In that way, both parties will know the reality of the situation and can proceed from there.

Contractors advice and that of your home inspector are sometimes in conflict. Remember that the home inspector works for you. When suggesting that basement leakage may be resolved by attention to eavestrough, grading and window wells, he has both the problem and the balance of your checking account in mind. A contractor called to view the same scenario, may suggest a ten thousand dollar approach. Both will work. You must choose which remedy you prefer.

**In this text, references to "further investigation by qualified personnel" are not discipline specific. It is the buyers responsibility to contact - say - an appropriately qualified electrician for electrical faults or a structural engineer for structural defects, before continuing further with the transaction.**

**If you have any questions about this report or its contents, or you are in any way unsure of its meaning, you must contact us before proceeding.**

When viewing the property and reading this report, the conventions front, rear, left and right, assume that the reader is standing on the street looking at the front of the building. In any other circumstance, compass points apply.

## General Exclusions and Limit of Liability

The following items are excluded from the inspection: Appliances, including window or portable air conditioning units, furnace or heat pump heat exchangers or heat shields, buried oil tanks, interior flue liners, outbuildings, alarms and intercoms, computer LAN or other integrated technical low or high voltage wiring, septic, well and irrigation systems, other below grade sewage and water pipes, environmental tests (including but not limited to, radon, UFFI, lead or asbestos), swimming pools, spas, hot tubs and related equipment, termites, carpenter ants and other insects.

Specifically excluded are any problems whatsoever relating in any way to the presence of fungus, moulds, toxins or other similar or related materials including health problems, flammable chemicals, clean up costs, abatements or other expenses.

We recommend water potability tests for all homes.

We do not dismantle heating or air conditioning equipment. We do not carry out any destructive testing, perform any procedure which will likely be dangerous to the inspector or other persons or damage the property or its systems or components.

Existing buildings are not required to comply with today's building codes. Therefore this report makes no claims as to compliance (or otherwise) with any building, construction related codes (including, but not limited to, fire codes and zoning) of any discipline or specific Insurance Company requirements, currently in force, or suitability of the structure for any other specialized use.

Roof and basement leakage and sewer back ups are often unpredictable and generally unexpected. We are therefore not able to provide any guarantee that these items will not leak, back up or significantly deteriorate, before the expiry of any estimated lifespan that may be shown elsewhere in this report.

Indications of particular deficiencies may require an extrapolation. The report may show for instance, "Rot" in the window section. This means one **or more** windows may be affected.

This inspection is intended to substantially increase your knowledge of the features of your new home and to point out deficiencies that may adversely affect its performance.

**Your attendance at the inspection is a major factor in that input.**

For the most part a home inspection is an educational tool requiring your participation. We appreciate that circumstances can occasionally make it impossible for the buyer to be on site at the time of the inspection. This written report however, will never replace the understanding achieved for a one-on-one interaction with the inspector.

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It is agreed and understood that any notification of defects, omissions or errors alleged to have been made by the inspector, his company or agents, must be notified in writing, by the purchaser or his agent, to the said inspector, inspection company or his agents within 365 days from the date of the original inspection.

Such notification must be made in writing by registered or recorded mail to the registered offices of the inspector, his company or his agent.

Facsimile (fax) or e-mail notifications are not acceptable, nor will they be accepted.

It is further agreed and understood that in the sole discretion of the inspector, his company or his agent, any matters in dispute may first be sent to mediation or binding arbitration and that no court or other litigation proceedings will be instigated prior to that mediation or arbitration.

The liability of the inspector, his company or agents, in any dispute, is limited to the fee paid for the inspection.

Hantavirus is a growing concern in some areas. Most properties have mice living in some parts of the building. The inspection cannot determine the level of infestation if any. You must contact your local rodent control officer or health department for further information on this subject.

## **NOTE:**

Where this report indicates the need for any further investigation or review by additional, qualified personnel, you must make that arrangement and review the further report from those personnel, **prior to proceeding any further with your transaction.**

We make no charge to discuss reports with you. You must further contact us, before proceeding with your transaction if you are in any way unsure of the meaning, significance or purport of **any** part of the text,

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## Roofing, Flashings and Chimneys

### Description

*Geometry of Roof*

*Hip.*



*Sloped roof covering:*

*The sloped roof cover consists of Asphalt shingles.*

*Chimney:*

*The chimney is made of Metal.*

*Flue Liner:*

*Metal flue liner installed.*

*Flashings*

*Metal, tar, roof/ wall. Most not visible.*

*Roof Drainage System*

*Aluminum, Gutters, Downspouts.*

### Limitations

*Roof inspection by:*

*Walking on.*

*Roof inspection*

*Flashing details concealed by roof covering.*

*limited/prevented by:*

*Chimney inspection*

*Interiors of flue liners not visible/ inspected.*

*limited/prevented by:*

### Conditions

*Sloped roof coverings:*

*Percentage of roof cover not visible 0%. Ice & water shield recommended when repairing/re-roofing. Interim repairs are common over life of shingles. Monitor(see maintenance). Worn/ Some curling noted curled shingles noted. typical for age. Tar patches noted leak may have occurred from roof.*



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***Expect to renew roof shingles within***

*4 years to reduce risk of water leaks. Recommend reviewing on a yearly bases.*

***Chimney(s): Exterior only***

*Chimney not in use. Sealed off at bottom.(See interior re: w.e.t.t(wood energy technology). to inspect all solid fuel appliances/ chimneys)*

***Flashings (roof):***

*Check all flashings annually and seal/repair as required to reduce risk of water leaks.*

*Recommend replacing flashings as required when re-roofing.*

***Flashings (chimney):***

*Check all flashing and seal as required annually to reduce the risk of water leaks. Recommend replacing flashing when re-roofing.*

***Roof Penetrations***

*Pipe stack.*



***Read this.....***

*We make every effort to examine roof materials closely, however there will always be times or circumstances that make it unsafe or impossible to climb onto roof areas. This may be due to steep slopes, weather poor access or snow. It will always be in the inspector's absolute discretion to judge any personal safety issues.*

***Roof, chimney and skylight flashings need regular maintenance to prevent leakage.***

*Lack of maintenance to roof components may significantly reduce their life span or allow leakage. Read the maintenance section provided. Where roof coverings or flashing areas need repair, there may be underlying, unseen damage to the sheathing or to the roof structure.*

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## The basics...

The roof protects the building from water, snow and sun.

## Slope

The roof pitch is measured by considering how far it goes up (rise) against how far it spans horizontally measured from a plum line through the centre of the ridge (run). Always use twelve feet as the run, so a roof that goes up six feet (over a distance of twelve feet) would be said to have a 6:12 slope.

Roofs with a rise/run ratio of 4:12 down to 2:12 are considered to be 'low slope' and need special shingles or other treatment. Roofs with a slope of 2:12 or less are considered to be flat.



## Coverings

Asphalt shingles are the most common roof covering for sloped roofs, followed by metal sheeting. Cedar, terra cotta, slate or concrete shingles are also available.

Flat roofs have a waterproof membrane, usually made of asphalt, tar, PVC or rubber. The gravel seen on many flat roofs protects the tar, asphalt and so on from the UV rays of the sun. It has nothing to do with waterproofing.

## Life expectancy

*Asphalt shingles:* 15 - 20 years depending on the climate and proper ventilation. Manufacturers' claims for 25 or 30 year shingles are not always substantiated in the real world.

*Metal:* 20 - 50 years - but you may have to do some maintenance such as repairing seams or painting.

*Wood shakes:* 30 - 50 years.

*Wood shingles:* 15 - 20 years.

*Concrete or clay tiles:* 50 - 100 years - but these are very heavy and need additional support for the roof structure.

*Flat roof:* 10 - 35 years (depends on material)

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## Ice damming

Ice dams are caused when inadequate attic insulation or major air leakage allows heat from inside the building envelope to escape through the roof and cause snow to melt on the roof. The water runs down the roof until it meets the colder overhang, where it freezes.

Subsequent melting water, trapped behind the dam, builds up until it seeps under the shingles and penetrates the roof. There is a good likelihood that leakage will result.

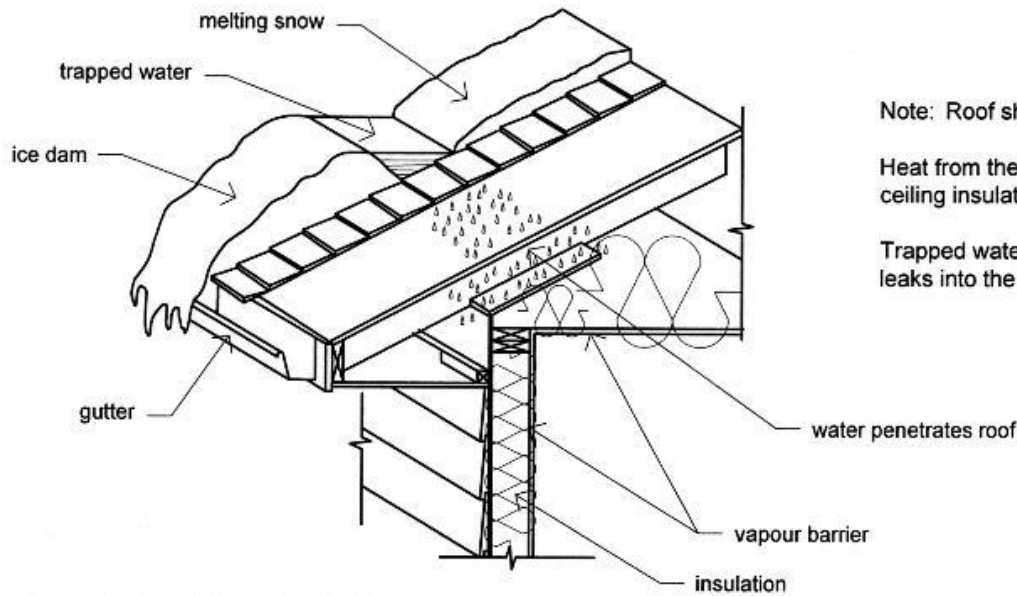
Installing tarpaper and/or ice and water shield when repairing or re-roofing generally prevents moisture penetrating the attic spaces. To resolve the problem on a more permanent basis, improve attic insulation and ventilation, especially at the eaves. In extreme cases - heating cables are a temporary fix.

Do not walk on roof shingles during the winter months in very cold climates. Resist offers from roving bands of snow clearance contractors. Few residential roofs are damaged by snow loads and walking on the shingles when they're frozen will cause significant damage, which won't be visible till spring. Likewise asphalt shingles can be damage in hot weather by walking on the roof covering thereby removing the stone granules.

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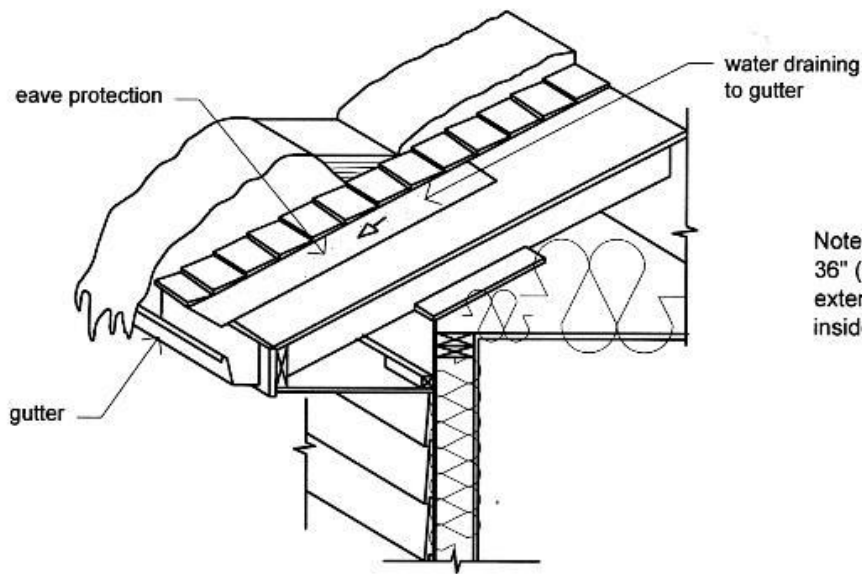


Note: Roof shingles

Heat from the building melts snow where the ceiling insulation is inadequate.

Trapped water moves behind the shingle and leaks into the building envelope.

## Without Eave Protection



Note: Eave protection to be a minimum of 36" (900mm) wide. Eave protection must extend at least 12" (300mm) beyond the inside face of wall studs.

## With Eave Protection

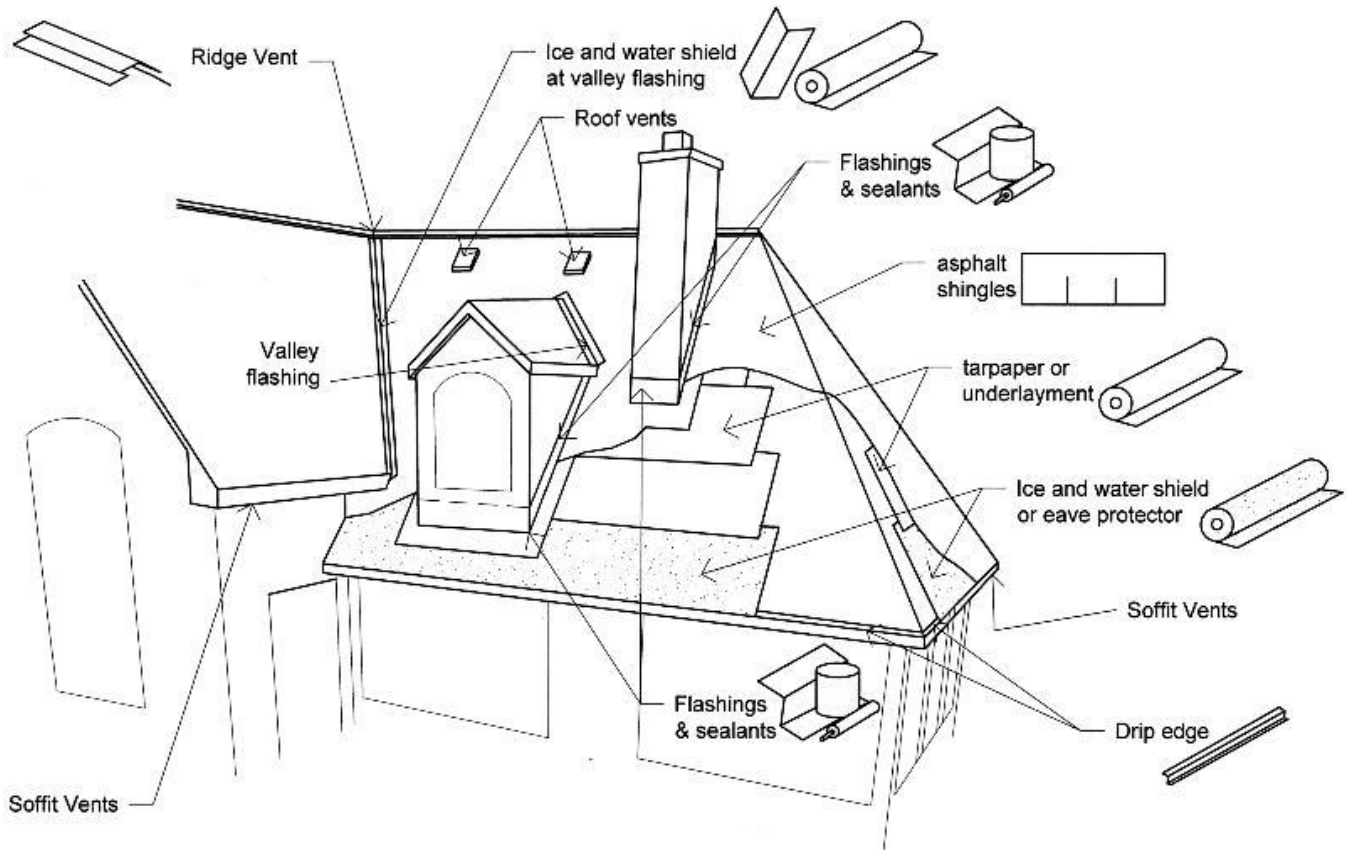
### Flashings

Flashings are the materials that are used where necessary to prevent the entry of water through joints between materials. Flashing should be used at the junction of roofs, walls, chimneys, over window and door openings, in roof valleys and on other critical areas. Flashing plays a major role in protecting your house from water penetration. Failure to maintain these components can result in serious damage to the interior of the structure. Failure to perform regular maintenance for skylights and solarium, or add-on spaces can result in water penetration and damage.

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## Chimneys and flue pipes

Chimneys and flue pipes are used to discharge the gasses that are produced when we burn fossil fuels (gas, oil, wood and so on) to heat our homes or heat water. Chimneys are designed to withstand significant temperatures, (above 1,200 degrees Celsius during a chimney fire) and the constant heating and cooling associated with thermostat controlled devices.

It's essential therefore that all chimneys and flue pipes are examined and maintained **annually**. This may only mean having a licensed chimney sweep come once a year. We recommend that all chimneys are cleaned and examined as soon as you move into your new home and before you use any wood burning devices.

## Liners

Flue liners are the metal, cement, terra cotta or clay pipes, used to protect the exterior part of the chimney and the interior of the house from fire, heat and acids.

Damaged flue liners are a potential fire hazard. Any damage, rust or other deterioration must be repaired or the unit(s) replaced immediately. Gaps or openings in the flue liner can also cause damages.

Many oil burning devices do not have stainless steel flue liners. Many jurisdictions now require this feature. If your home happens to be in that geographical area, you may find that your oil supplier will refuse to supply oil until the liner is installed. Your home inspector will have knowledge of the local requirements.

Flue pipes must be kept clear of roof materials to prevent fire. The chimney flue should be high enough above the roof to avoid



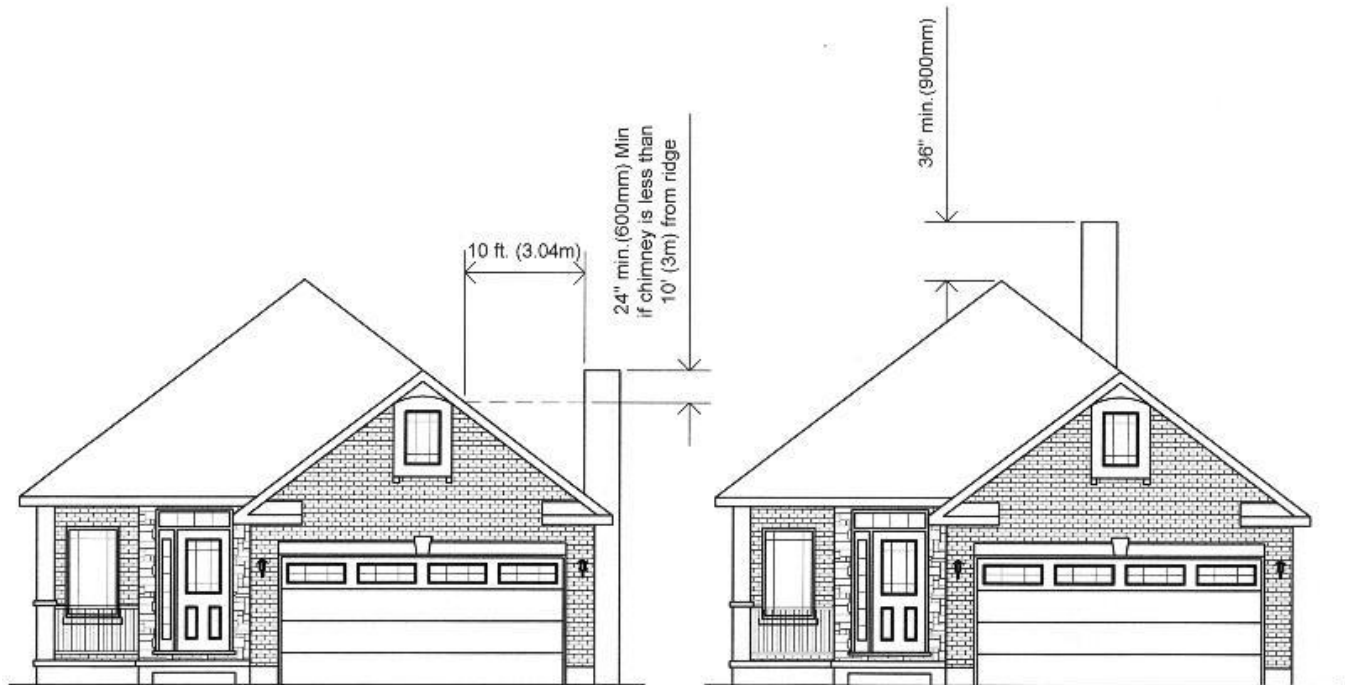
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downrafts.

This is a guide to recommended clearances.



## Trees and vines

In some areas, its popular to allow vines or other foliage to grow over and around the exterior of chimneys and flue pipes. In most cases where the vines grow near the top of the chimney, they present a significant fire hazard and should be cut back to clear the top by at least three feet.

Never grow vines on siding, stucco or over roof areas. The roots will penetrate the exterior, causing damage and creating a potential for leakage.

Trim trees that overhang roofs so as to create a six foot clearance. **Extreme caution is required in trimming near overhead electrical power lines.**

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## *Exterior surfaces and elements*

### **Description**

**Walls:** *The wall cladding(siding) is Vinyl.*  
**Gutters and downspouts:** *Aluminum gutters and downspouts are installed.*  
**Lot grading/surrounding land:** *Flat, Slopes away from house.*

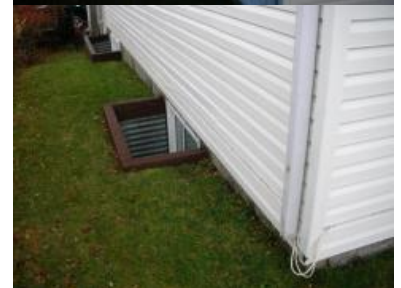
### **Limitations**

**Exterior inspection limited by:** *Inspection from ground level, Fences/gates/outbuildings(sheds)/docks/sea and break walls/erosion control walls not examined. No garage(defined as structure with concrete floor/slab). No access under front step.*

### **Conditions**

**Gutters and downspouts:** *Installation of gutters and downspouts is recommended at left and right side. to reduce risk of water seepage to basement. see info. Recommend installing downspout extensions to discharge water 4 to 6 feet from foundations or to a distance that the water flows away from house to reduce risk of seepage into basement. Common (see info)*

**Grading near house/garage:** *Re-grading soil at foundation(as required) is recommended to ensure positive slope away from building to help direct water away from foundation, reducing risk of water seepage to basement( poor grading is common). see info.*



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## **Walls:**

*Common cracks and holes noted on siding. Repairs are recommended to protect structure from damaging weather. Recommend ensuring all penetrations are sealed as regular maintenance to prevent damaging water seepage. Expect replacement of some framing/ sheathing if installing new siding, windows, fascia/ soffit(common). Recommend cleaning dryer exhaust vent as regular maintenance for proper operation/ prevent possible fire hazard.*

## **Driveways:**

*The pavement(appears newer) of the driveway extends past the lower city concrete curb. This poses a trip and vehicle damage hazard. Recommend cutting curb flush with driveway for safety and to prevent cost related vehicle damage.*



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## **Walkways & Patios:**

*Slopes towards building at the left side and is higher than the wall siding at wall step. This will increase risk of seepage to the basement and cause possible damage to the wall structure from water wicking. Recommend repair to ensure adequate slope away from house and provide adequate distance from walk to siding. Typically minimum of six to eight inches. Concealed damage may exist.*

## **Decks, steps, balconies, and porches:**

*Poor flashing detail at side of deck at ledger board. this will likely allow water entry inside wall. Concealed damage may exist. Correction/ repair recommended. Fasteners used to attach joist hangers(supporting floor joists) do not appear designed for that purpose(wood screws apparent)and may fail. Recommend replacing with joist hanger nails for safety.*



## **Soffit and fascia:**

*Did not determine if adequate ventilation exists above vinyl perforated soffit.*

## **Windows:**

*Soft areas on two wood basement windows(rot) at left side. Recommend replacement to prevent further damage/ reduce risk of water entry causing damage to the interior. Rot potential - framing behind/under windows( as with any penetration through exterior wall).*



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## Doors:

*Rot noted at basement walkout door. Replacement is recommended to prevent further damage to door and wood structure( concealed damage may exist)(most attempts to repair door frames/ trim tend to fail over a short period of time). Paint/stain, Caulk doors, as required (see maintenance). Rot potential - framing behind frames or under threshold.(typically if not properly maintained).*



## Foundation walls:

*No cracks observed. Minor cracks are common, see info re: structure.*



### Read this.....

*Most basement water infiltration problems can be attributed at least in part, to poor exterior drainage. Unless you attend to gutters, downspouts, grading and so on, you must expect that the water will eventually come inside. Buyers who take possession in the Winter months are often unable to carry out necessary repairs and re-grading until Spring. This is unfortunate, but does not reduce the potential for leakage.*

*French drains are a last resort for water removal and with time they will fill up with silt and require cleaning by a professional. At the 20 year intervals the old clay teracotta tiles could collapse and need replacement. Consult a specialist if problems develop.*

*Ensure that the grade (dirt, grass, asphalt, interlocking brick etc.) is at least 6 - 8 inches below any bricks or siding.*

*Often, on older homes, aluminum ventilated soffit is installed over solid plywood. Generally a visual examination cannot determine if there is adequate ventilation **under** the aluminum soffit. Resulting ice damming and associated leakage can cause damage in the attic, walls and basement.*

*Basement windows will leak if you allow snow or water to rise up over the frames as a result of poor drainage or inadequate window wells.*

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## Exterior

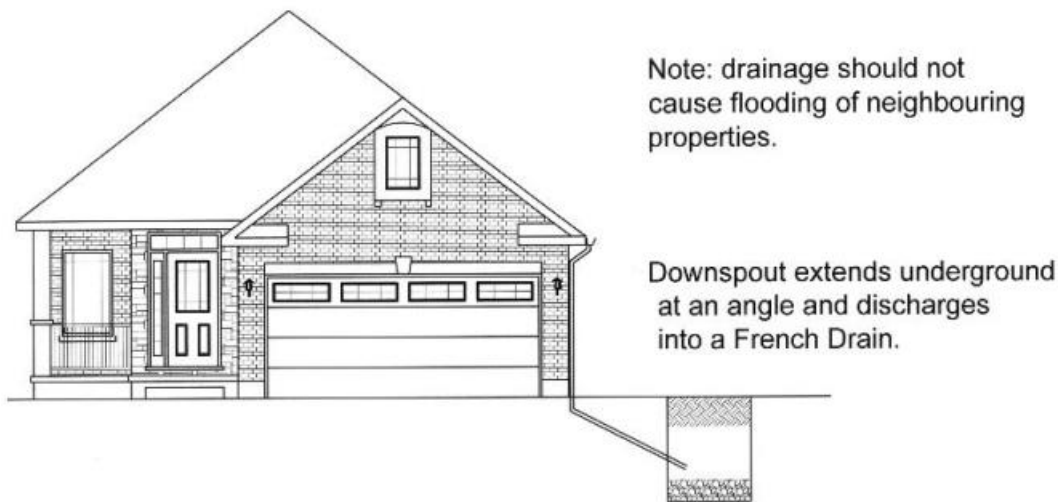
### Eavestrough and downspouts

Eavestrough or gutters collect water from roofs and (should) discharge it through downspouts or drain pipes, well away from the building walls or other structural support features - columns or posts for instance.

If you allow downspouts to discharge water against or near foundation walls, window wells, windows and so on you will significantly increase the likelihood of water penetration into below grade areas. Often downspouts that discharge near the junction of a driveway and a paved drive will allow water penetration under the asphalt, concrete or interlock -eventually causing damage, settlement or heaving.

**Ensure all downspouts discharge at least six feet from the building.** Rigid extension pipes work but you have to move them each time you want to mow the grass and they are often difficult to site where they won't be in the way. The soft, roll out type doesn't work well in cold climates as they freeze easily.

When installing extensions, only use rigid PVC or ABS pipes (three or four inch diameter is usually adequate). The corrugated, black pipe used as a perimeter drain at foundations is popular - however as it has holes in it, the rain water falls out before it reaches the discharge point - for this application, the pipe is useless! Creating a French drain or soakaway is often a successful alternative.



Do not allow downspouts to discharge onto lower roof shingles. The constant flow of water, over the same area, will cause premature wear and creates the potential for leakage.

### Rain barrels

Rain barrels are a good idea if you need to collect water for your garden. You must however ensure that the overflows are treated in the same way as normal downspouts and discharge at least six feet from the building walls.

### Grading

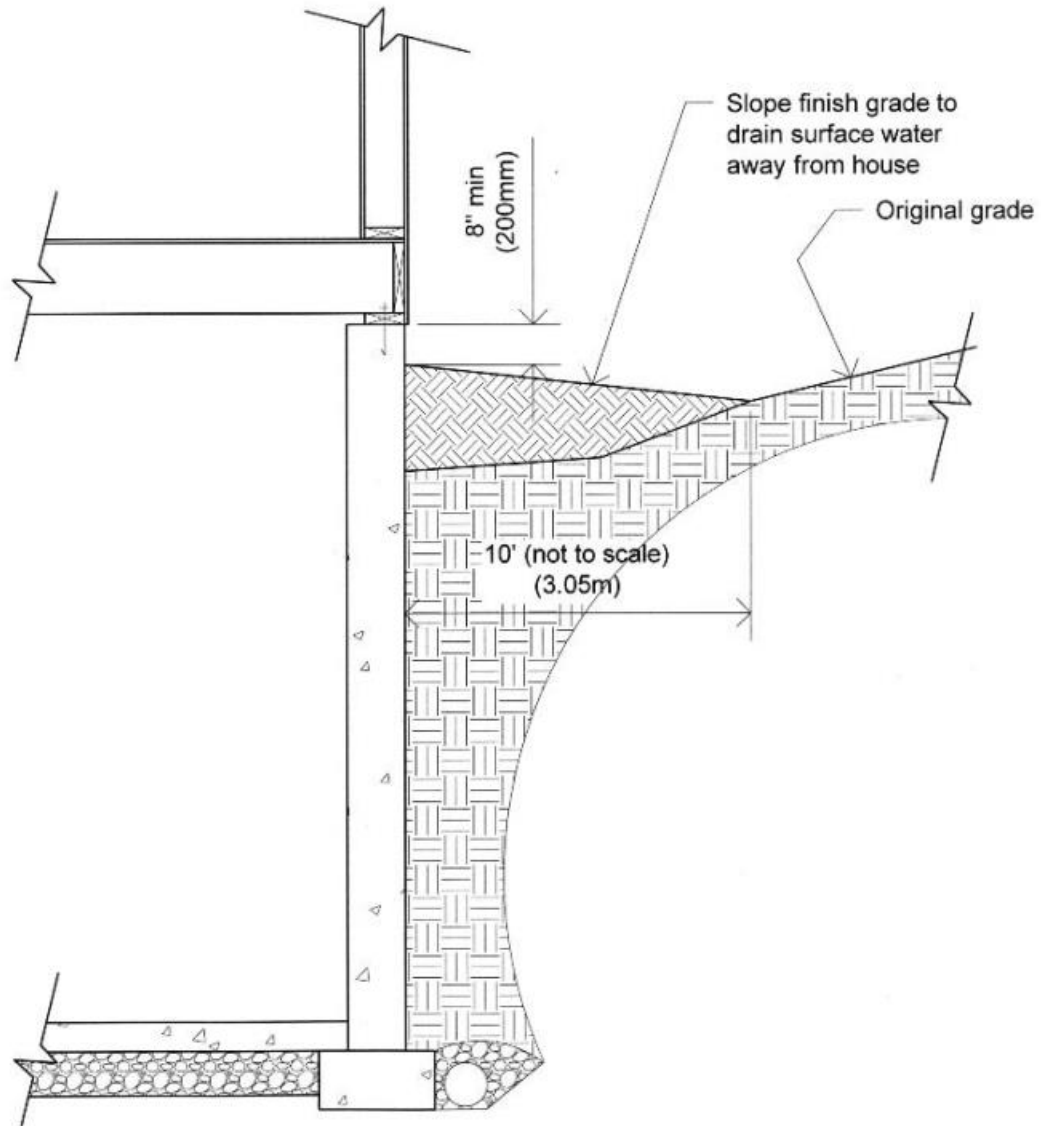
Grading relates to the topography of the entire land surrounding the building and includes paths, patios, walkways, drives, lawns and so on. It's important that the grade slopes away from the building walls at a rate of about an inch in ten feet, for at least the first six feet. This includes areas under decks and porches. Often you can achieve this by simply importing dirt or topsoil. Gravel, sand or other porous materials generally don't work as the water falls through and remains close to or against the building walls.

In some cases you will have to dig a ditch or swale to make the water run away from the building or you may have to install window wells.

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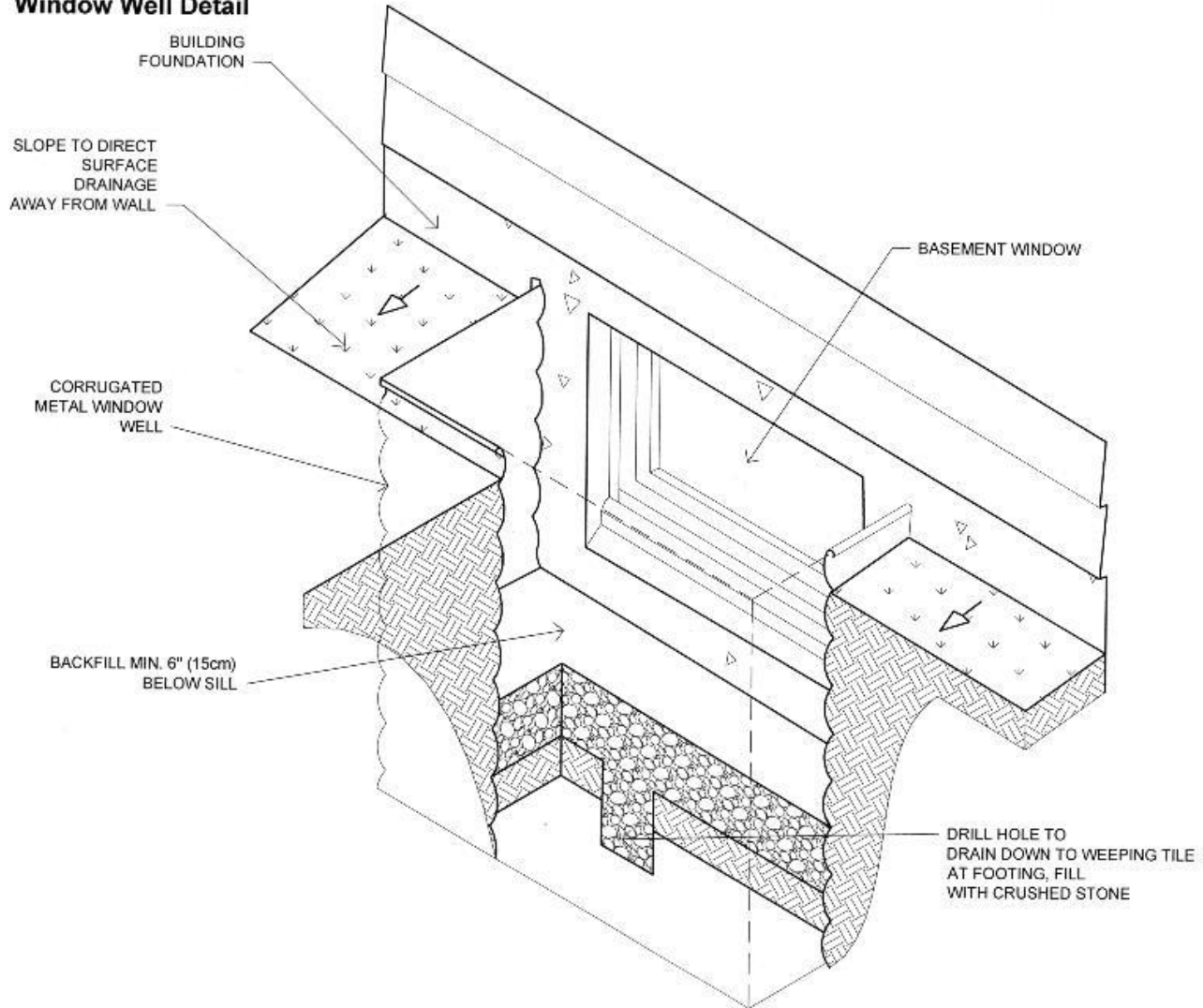


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## Window Well Detail



## Trees

Large trees near houses can cause significant damage to foundation walls, floors, drainage pipes and roofs. Be sure to trim branches well away (six feet minimum) from roofs, chimneys and walls.

Root infiltration into perimeter drainage tiles at the footing level can cause water to rise against foundation walls, creating a potential for leakage. In homes with septic systems, roots will clog weeping tiles and may cause system failure.

In the event that large limbs or even the tree itself needs to be removed - always use a qualified contractor. Even small branches can be very heavy and it takes an expert to drop a tree into a confined space.

Homeowners are generally poor at judging height (against what it will look like on the ground) and the contractors fee will almost certainly be less that the repair costs you'll face, if you fell a tree onto your house or car!

## Doors and windows

Wood doors and windows need regular attention by way of painting or staining and caulking.



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Its seldom worth replacing windows unless theyre falling apart or aesthetically - they drive you crazy! Repairs are almost always less costly than replacement and the heat loss savings declared by some manufacturers may not be as significant (or achievable) as their claims might suggest.

Vinyl or aluminum windows often only need cleaning with soap and water. If you have a brick or stone home that has steel lintels over the windows and doors, you must paint the lintels with a metal rust proofing paint (Tremclad for instance) - otherwise the rust may permanently stain the vinyl.

Attend to the joints of all clad windows - especially at the corners. Loose or missing caulking here may allow water to get inside the cladding and rot the wood underneath.

Operating windows need attention to mechanisms and tracks. Sliding window tracks can be lubricated with a silicone furniture polish.

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## Foundation and Internal Structure

### Description

<b>Foundations:</b>	<i>Foundation is made with poured concrete.</i>
<b>Style:</b>	<i>Basement.</i>
<b>Beams:</b>	<i>Not visible.</i>
<b>Interior columns:</b>	<i>Not visible.</i>
<b>Floors:</b>	<i>Wood joists.</i>
<b>Floor sheathing:</b>	<i>Plywood.</i>
<b>Exterior walls:</b>	<i>Not visible.</i>
<b>Roof structure</b>	<i>Trusses.</i>
<b>Roof sheathing:</b>	<i>Planks.</i>

### Limitations

<b>Structural inspection limited by:</b>	<i>No access under sub floors, Finishes (drywall, insulation, flooring, etc.) concealed some structural components. Finished basement walls are vulnerable to water damage/rot and may not be evident until renovations occur. Footings not visible. Geotechnical/ geological/ hydrological conditions not inspected/considered. Attic spaces seen only from access hatch. Storage limits view.</i>
<b>Approximate percentage of exterior foundation walls not visible:</b>	<i>85%.</i>

### Conditions

<b>Foundations:</b>	<i>Basement finishes limits view of foundation.</i>
<b>Footings:</b>	<i>Footings not visible.</i>
<b>Wood floors:</b>	<i>Not level, Squeaks, Minor (common).</i>
<b>Sub floors:</b>	<i>No access under. Sub floors are vulnerable to water damage/ rot. In many cases it is not evident until renovations occur.</i>
<b>Basement walkout:</b>	<i>Proper drainage not confirmed.</i>
<b>Roof trusses/rafters/sheathing:</b>	<i>Expect some sheathing replacement when re-roofing(common).</i>



*Read this.....*

Residential buildings are seldom subject to catastrophic failure - that is to say, they don't often just fall over!

The structural integrity of a house is of primary concern. The structural system is made up of footings, foundations, exterior walls, floors and the roof systems. These systems must withstand the required forces imposed upon them, such as dead and live loads, winds, earthquakes and other events depending on the location of the building.

Serious structural defects do occasionally occur over time, sometimes with the help of inept workmanship and deterioration of building materials. Unless you have some specialized equipment and a serious understanding of the issues involved, it's unlikely that you will be able to carry out successful structural repairs yourself.

We recommend that you get at least three written quotations from qualified contractors whenever structural defects are identified.

**Cracks can be result of shrinkage, differential settlement, lateral pressure being exerted on the wall by the soil, or**

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poor quality work. Equally deteriorated mortar joints should be repointed.

All cracks should be sealed as a precautionary measure against water penetration into the structure.

In some older homes with masonry foundations, there may be soft, crumbled and flaking units. These should be repaired.

Dampness in a basement is a normal phenomenon that occurs because cool air cannot hold as much moisture as warm air. It does not always indicate that there is a water problem in the basement. Dampness in a basement or crawlspace can be controlled through moisture barriers and with the aid of dehumidification system, and/or with the addition of ventilation. It is not uncommon for home owners to install and run dehumidifiers for the warmer months. This helps in lowering high moisture levels in a home and reduces dampness.

Water seepage is a general term that refers to water intrusion. Water seepage can be caused by a number of factors. It is important to determine the cause and source of the seepage.

## Structure

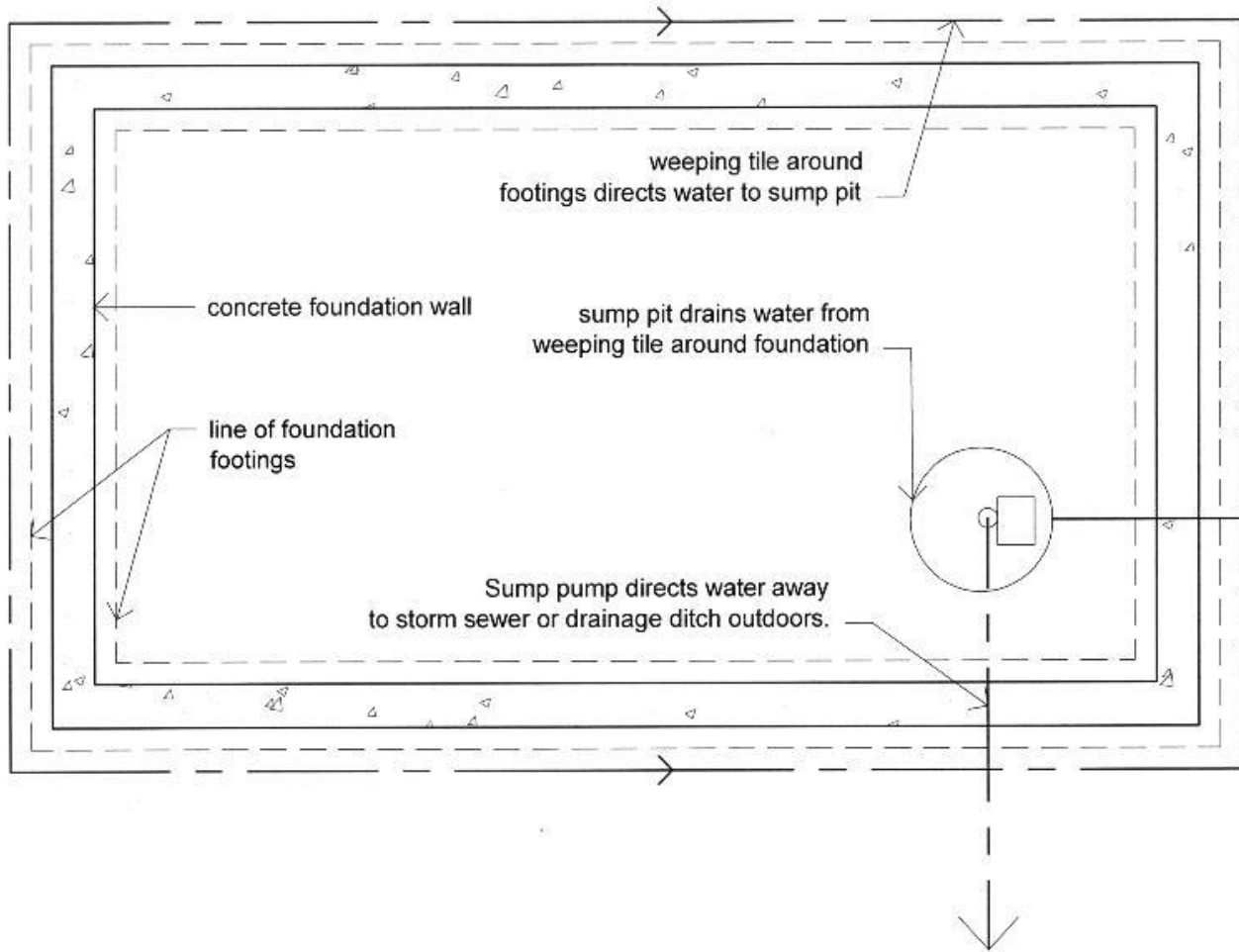
The building structure is comprised of the parts that help it to keep its shape - framing, roof trusses, rafters and so on, and the parts that prevent gravity from pulling it into the ground - foundations, footings and piers.

In any building, the parts that are at the bottom - foundations, footings and so on, have to be strong enough and sufficiently well supported to carry the weight of everything above. So you can see that where homes are built on unstable ground or where **make** the ground unstable by constantly soaking it in water (poor drainage, eavestrough, window wells etc.) will increase the likelihood of structural damage.

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## Foundations

The foundation walls not only carry the weight of the building, but they also stop the soil outside the basement falling in. When the drainage is poor or where the perimeter drain at the footing is clogged or missing, water can build up against the exterior foundation wall. The resulting pressure can cause cracking or often, in the case of masonry block walls, lateral displacement.

Foundation walls also crack as the result of settlement. The ground below the footing sinks and the wall tries to follow but being stiff, cracks in the attempt. Settlement cracks are often easy to repair, sometimes needing only minimal patching or sealing. In some cases, attention to grading and exterior drainage, will prevent or minimize leakage, even if the crack is left unsealed.

Other settlement cracks may present significant structural defects that will need a professional to repair. In these cases the structural problems must be addressed as soon as possible by a qualified contractor or structural engineer, to prevent or minimize further damage or water penetration to the lower levels.

Homeowners and buyers occasionally mistake cracks in the cement parging, for cracks in the foundation wall itself. Parging is the thin cement coating used as a decorative finish to cover foundation concrete or masonry blocks.

## The inspection.

Inspectors are often unable to see more than about five or ten percent of the exterior foundation walls because most of it is under the ground! Interior finishes and storage can create a similar problem indoors.

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Not all structural problems involve movement and where building components are hidden underground or behind interior finishes or furniture - it may be impossible to determine or identify problems.

The repair of some minor structural problems may be undertaken by the homeowner. (Some minor cracks for instance). Most however need a significant understanding of the problem and the issues involved. Many will need specialized equipment. In the worst cases, your inspector may recommend the services of a qualified contractor or structural engineer.

## Basements

Most basements will leak at some time during the life of the building, either from cracks in the walls, the failure of a sump pump or perimeter drainage tile or as a result of poor or inadequate exterior drainage.

Often basements will only leak under certain specific circumstances or at certain times of the year. In these cases, unless there is some evidence of previous water infiltration, leaks can be impossible to detect.

Many basement water infiltration problems can be attributed at least in part, to poor exterior drainage. This includes gutters or eavestroughs, grading, window wells and so on. In many cases - attention to these issues can significantly reduce the problem. Evidence may include visible efflorescence on outer walls, water stains on wood at floor level, and paint peeling on both sides of a concrete floor crack.

## Basement walkouts

Many basement walkouts are poorly constructed and often have inadequate drainage. In cold areas, footings are often too shallow to be protected from frost, especially where the walkout was not part of the original construction.

Unless properly designed and constructed, basement walkouts can be a source of leakage and structural problems that may be costly to remedy.

Properly installed however, they are a source of light, access and air to below grade areas, often opening up rooms that would otherwise be used only for storage.

## Framing and trusses

Wood or steel framing in exterior walls is almost always structural. Warping, twisting or bowing can be signs of structural problems, which must be assessed on an individual basis.

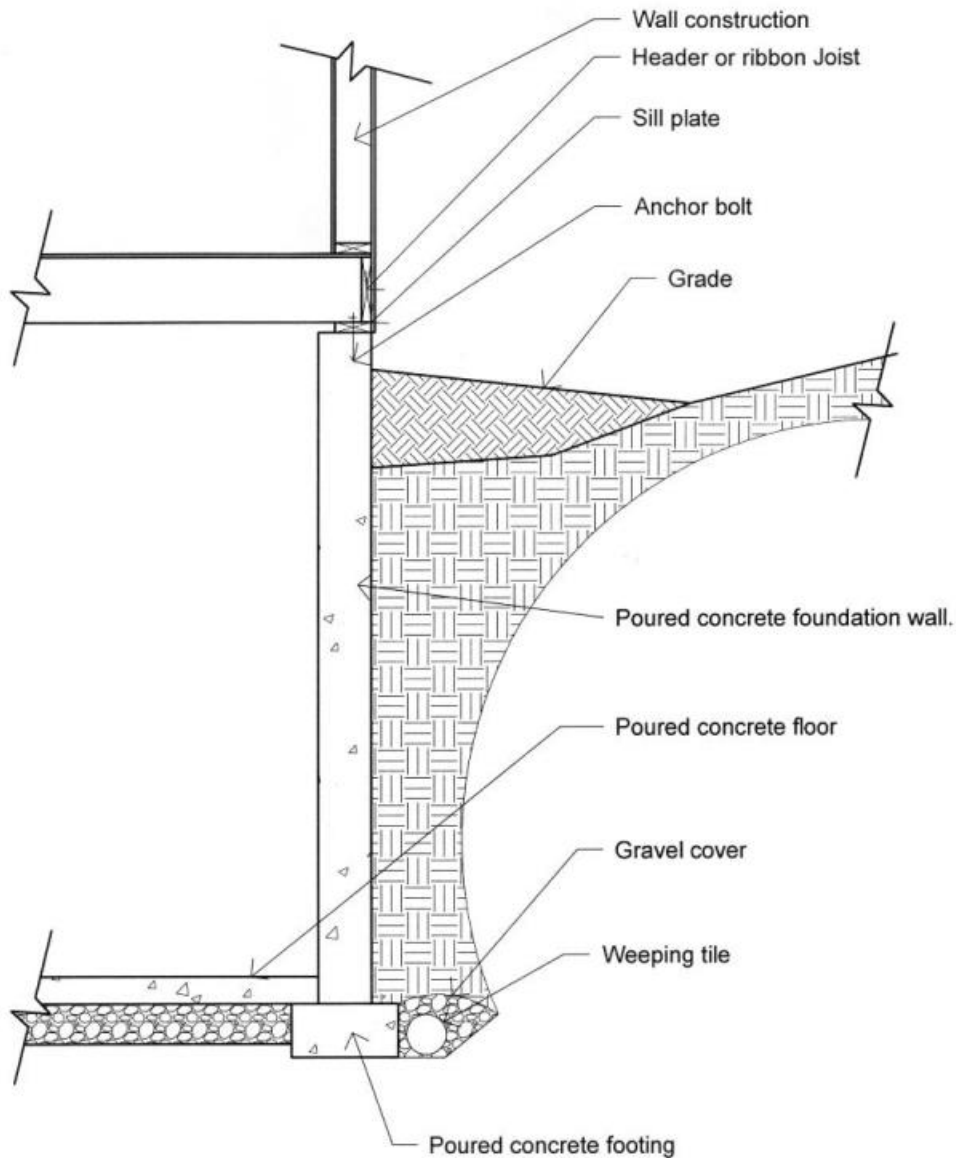
Interior stud walls may only be room divisions, however some are supporting walls for floor joists, rafters or trusses. Always consult with your qualified contractor before demolishing any walls.

Generally speaking, the steel posts seen in many basements, usually under wood or steel beams, are **not moveable**, except at great trouble and expense. When finishing basements, try to disguise them into partition walls or create decorative columns around them. Support columns should not be removed without professional advice from a structural engineer.

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## Roof trusses and truss joists

These are designed by computer and built in factories under controlled conditions. Each unit is specific to the structural requirements of span, load, snow loads and so on. Removing one or more sections (in attics to create rooms or a storage area for instance) will adversely affect the structural strength of the entire unit.

Modifications are generally not acceptable - especially on site. Any alterations **or repairs** must be referred back to the truss manufacturer for approval.

**Engineered wood products such as Truss joists** - also known as "Silent Flooring" or engineered joists, are similarly made in controlled conditions.

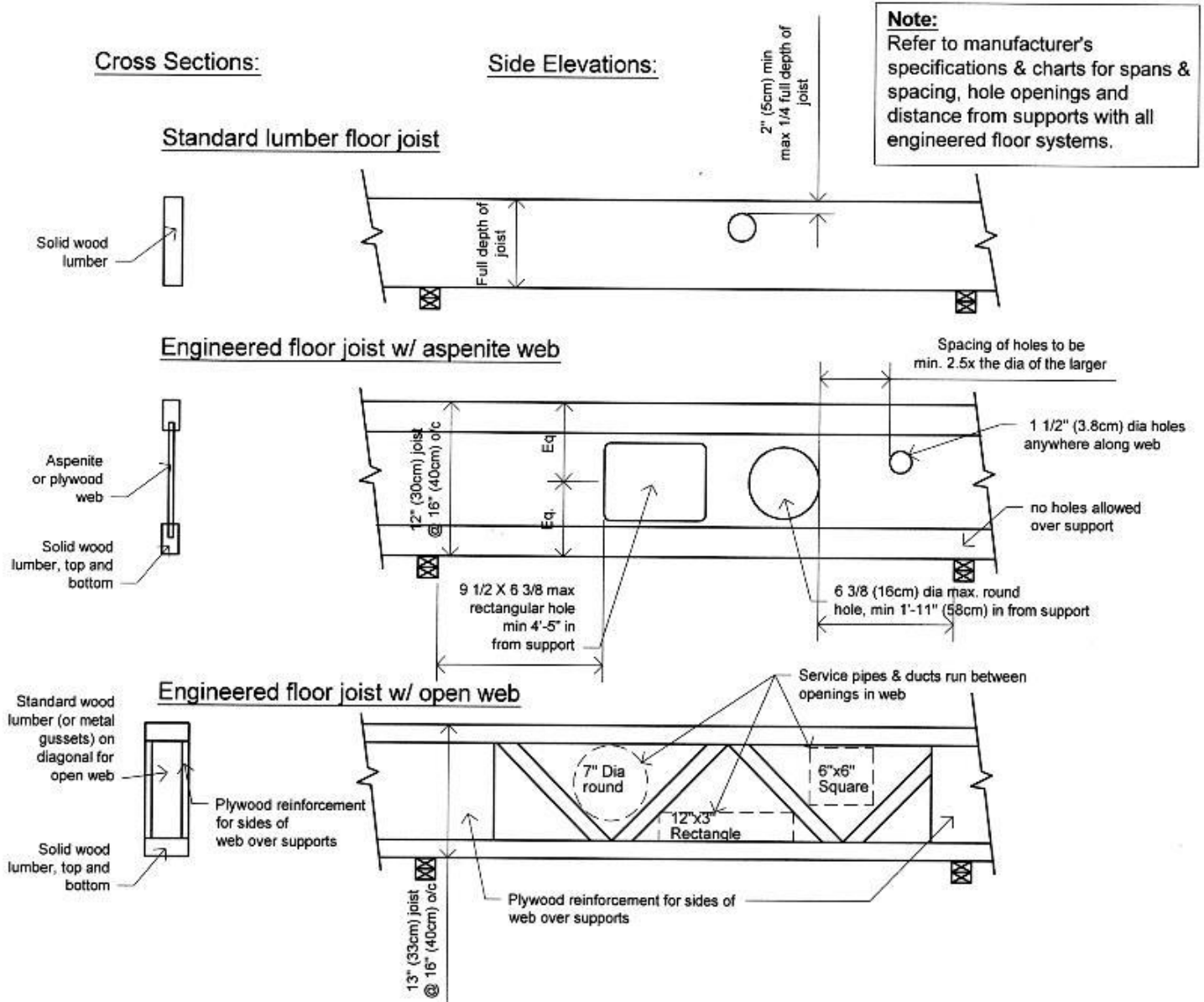
Cutting out sections for pipes, wires and ducts is only permitted in accordance with the manufacturers instructions. The following detail gives you an idea of the issues involved. We recommend that all alterations that do not fall within the manufacturers guidelines

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are referred for professional approval.



## Floors

Minor cracks in concrete floors in garages and basements are not unusual and unless severe are seldom a structural issue. Concrete floors are mainly poured independently of the building structure and are therefore free to move and settle without affecting the structure itself.

Uneven wood floors are also not unusual, especially in older houses. There are circumstances however, where the slope of a floor may be an indicator of a more serious problem.

Modern homes should have floors that are close to level.

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## Electrical System

**Note: Electricity is dangerous! You should contact a qualified electrician if you are in any way uncertain how to proceed.**

### Description

**Service cable is:** Overhead, Wire type not visible.  
**Main service size:** 200 amp, Apparent, as service size is determined by wire size( not verified).rated service by breaker size only.  
Breaker.



**Main service voltage:** 120/240 volts.  
**Location:** Basement.  
**Grounding is:** Copper.  
**Grounded to:** Water pipe, Most not visible.  
**Service panel rating:** 200 amp, Breakers.  
**Distribution wiring:** Copper as viewed. Where viewed.

### Limitations

**Electrical inspection limited by:** Components are hidden and limit our inspection to only visible components. Concealed wiring limits the inspection to only visible wiring. Fuse blocks/main disconnect covers not removed, Alarm/other low voltage systems not inspected, Did not determine load on circuits/ or circuits that are required to be dedicated circuits. Did not determine adequacy or if entire system has proper grounding. Presence of knob and tube wiring in walls/floors or other concealed areas not determined(typically houses older than 1945). AFCI breakers not tested. Doing so may disturb alarm clocks, computers etc. Did not determine if proper dedicated circuits in place. Ie: dishwasher, washer, fridge etc.

### Conditions

**Service entrance:** Sheathing on neutral wire at mast is deteriorating This has become a common issue with this age of home. Correction is recommended to prevent a life safety issue/ shock hazard. Replacing neutral wire from service drop to the meter base is a typical correction. Recommend having a qualified electrician review for remedial correction.





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## **Main panel:**

*Double taps noted( X2). (two circuits to one breaker), Recommend qualified electrician review/ correct as required to prevent possible nuisance tripping of breakers/ fire hazard. Minor rust noted at base of panel, no moisture at time of inspection. Monitor, seal exterior as required. No room for additional circuits. Upgrading size of panel or installing sub panel will be required if additional circuits required. Ie: adding heat source in laundry rooms and bathroom. To correct double taps.*

## **Branch circuits:**

*Recommend properly terminated branch circuit by water hear and by panel( provide junction box for safety/ (prevent fire hazard). Some poorly supported by main panel. Recommend having electrician review for any remedial correction.*



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***Stove/dryer:  
Switches/receptacles***

*Not visible(stove outlet)*

*Basement Family room, mudroom and hall areas have limited wall receptacles. This would indicate that permits were likely not obtained for basement electrical. More outlets are recommended to reduce the use of extension cords and splitters. Recommend having a qualified electrician review and correct as required.*

***Lights:***

*Pot lights over tub is a safety issue due to possible contact with water. Recommend installation of approved lights for area. No light switch located at top of stairs. Installation of 3 way switch for stairs recommended for safety as required. Recommend electrician review correct as required.*



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**Existing ground fault  
circuit interrupters  
(G.F.C.I.(s)):**

*Tested & working.*

**Installation of G.F.C.I.(s)  
recommended at all the  
following locations:**

*Kitchen, Typically If renovating kitchen or upgrading electrical.*

## **Smoke detectors**

**Smoke Detectors**

*Present. Smoke alarms were not tested, doing so may disturb people or pets/ alarms sometimes stick on. Regular testing and replacement as required is recommended for safety. Consult your local fire department for further information. See info re: AFCI's( arc fault) breakers. Not required at time of construction.*



**Read this.....**

**All electrical defects are hazards that have the potential to cause fire or serious injury. For you safety, we recommend that where deficiencies are noted, a professionally qualified electrician attend to make repairs immediately.**

Modification to your electrical panel should be done by a licensed electrical contractor.

Computer and other sensitive electrical equipment fitted with surge protectors, must be installed on grounded circuits to benefit from the protection.

The use of extension cords for permanent fixtures or appliances (such as garage door openers) is relatively common although unsafe practice. Generally extension cords indicate a lack of sufficient electrical receptacles. This is most common in older homes. Be sure that appliances have proper electrical outlets installed nearby.

Relocate any outlets above baseboard heaters. The wires from any appliances in use - could drape over the heater - creating a potential for fire or electrical hazard.

Fuses and circuit breakers are safety devices in your electrical panel that are designed to prevent overloading and potential

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fire hazards.

GFCI's are generally required for exterior outlets, bathroom outlets and in new kitchen construction where receptacles/outlets are being installed within 1 metre of the kitchen sink.

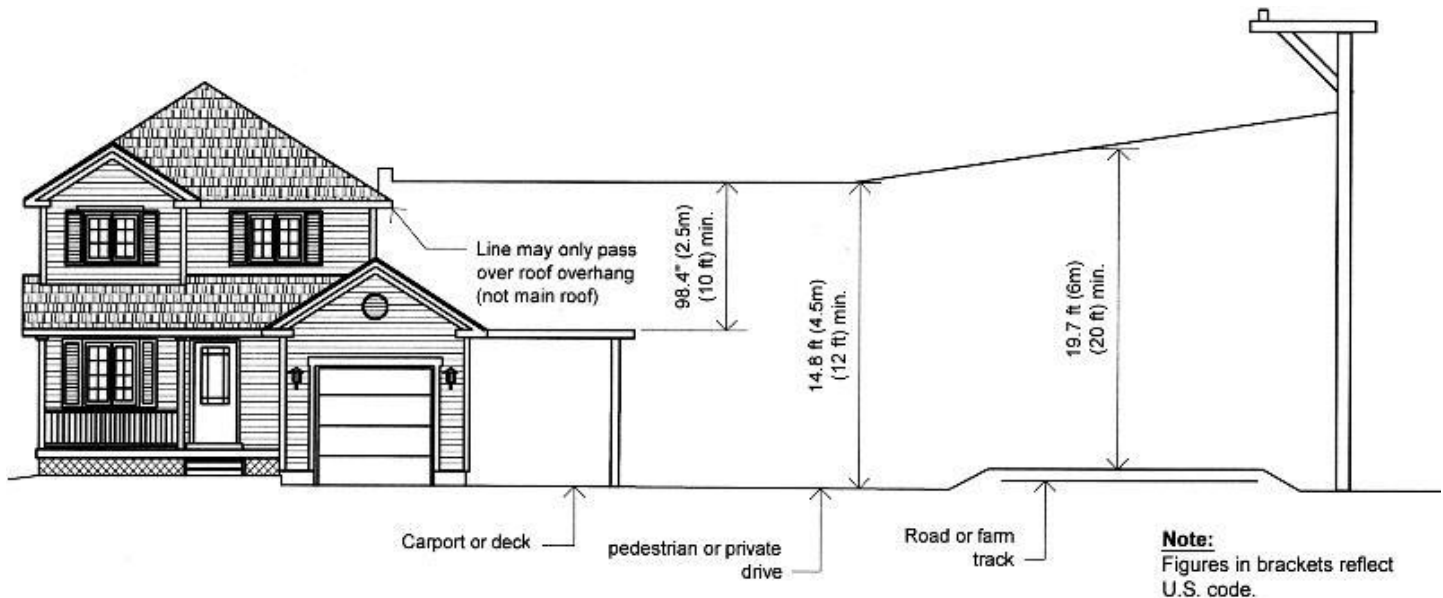
Two prong outlets are legal but substandard. Generally 2 prong outlets indicate there is no ground present.

It is common for buyers to discover additional electrical issues after taking possession of the home where unprofessional installations/alterations have been noted on the day of inspection.

## Electrical

The electrical system carries the electricity from the Hydro Company's wires in the street (overhead or under-ground), through the meter to the electrical panel. The electrical panel is the distribution centre (via the branch circuits) for the electricity throughout the building.

Overhead cables must have adequate clearances from the ground, paths, driveways and so on. The diagram shows some of the more common variations. Geographic location may also have a bearing on the height. Always have your qualified electrician check any areas that may be suspect.



**The main disconnect** is the switch that allows the homeowner to turn off all the electricity to the building. It can be part of the main electrical panel or may be a separate unit nearby or remotely (often in the garage).

Many condominium unit panels do not have a main disconnect. The homeowner can then only turn off individual circuits via the breakers or fuses. Any work needing the whole system to be turned off (to change a breaker or add a circuit for instance) must be carried out by a qualified electrician.

**The service panel** is the metal box where the main electricity from the street is re-routed to the switches, outlets and appliances throughout the building.

Circuits are protected by fuses or breakers, which must be correctly sized for the circuit wiring.

It's not uncommon to find circuits over fused. The branch circuit wiring might for instance be rated at 30 amps but the fuse or breaker

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protecting it might be rated at 40 amps.

In these circumstances, in the event of a fault, the wire would overheat before the breaker or fuse tripped, creating a possible fire hazard.

**Branch circuit wiring** is the collection of wires that carry the electricity throughout the building. It may be copper, aluminum or a mixture of the two.

Be sure that branch circuits are properly protected by fuses or breakers. The use of larger fuses or any attempts to prevent fuses blowing or breakers from tripping by adding extraneous materials (silver paper or foil for instance) creates a significant fire and electrical hazard.

**Knob and tube** wiring was installed in some buildings until the 1950's. Today it's mainly considered to be obsolete. In some jurisdictions, despite the fact that it may be in good condition, many insurance companies will refuse or at the very least impose onerous conditions until it has been replaced.

If you buy a home with this style of wiring, expect to re-wire the building in the very near future.

Aluminum wiring was installed in many areas until the late 1960's and early 1970's. It's potential to oxidize in damp conditions, thereby creating a potential for overheating and fire, has made it unpopular.

If it's in good condition, there's no reason to change it, although we always recommend the installation of "copper pigtails".

This exercise involves adding a short section of copper wire (a pigtail) to each exposed wire - throughout the building. The special connectors used are air tight, thus reducing the likelihood of oxidization of the aluminum.

In some jurisdictions, insurance companies are requiring an electrical safety certificate if you have this sort of wiring.

**Ground Fault Circuit Interrupters (G.F.C.I.'s)** are the special outlets with the 'test and reset' buttons (often black and red). They must be installed to all bathroom and exterior outlets as well as to some special plumbing fixtures like whirlpool or air tubs, spas, swimming pools and to some outlets in kitchens.

Never install a G.F.C.I. where you intend to plug in a fridge or freezer. The induction motors on these devices can fool the G.F.C.I. into believing there's a fault. The G.F.C.I. trips and unless you happen to notice quickly, your food will spoil.

**Arc Fault Circuit Interrupters** are now required for bedroom circuits in all new construction, effective January 2002.

Note that some tract builders may have permits that pre-date the requirement, even though the homes aren't completed yet. It seems that in certain circumstances, these home may be exempt. Check with your local Chief Building Official's office or with the Electrical Safety Authority for your area for a definitive answer.

**Arc Fault Circuit Interrupters are installed only on 15 and 20 amp circuits.**

They help to prevent fire caused by arcing at outlets and switches.

**A.F.C.I.s vs G.F.C.I.s**

Don't confuse the two...

**A.F.C.I.s detect arcing and help protect against fire hazards.**

**G.F.C.I.s detect ground faults and help to protect against a shock hazard.**

**They are NOT interchangeable**

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## Heating

### Description

<b>Fuel:</b>	<i>Electricity is used to run the heating equipment.</i>
<b>Type of Heating Equipment:</b>	<i>Electric baseboard/fan heaters.</i>
<b>Age:</b>	<i>N/a.</i>
<b>Likelihood of failure:</b>	<i>Not able to determine risk of failure of electric baseboard heaters, Beyond the scope of this inspection.</i>
<b>Fuel shut off valve at:</b>	<i>Electrical panel(breakers).</i>

### Limitations

<b>Heating system inspection limited by:</b>	<i>Short summer test only, Buried tanks are not inspected as per our Standards of Practice. Solar heating not examined as per our Standards of Practice. Adequacy of air/water flow/heat supply not determined as per our Standards of Practice. Automatic fuel feeds not tested, Functionality of electric air filters not determined, Individual heating elements (electric furnace) not tested, Determining winter comfort is beyond the scope of a visual inspection. Clearances to combustibles not confirmed.</i>
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### Conditions

<b>Heat Recovery Ventilator/air exchanger:</b>	<i>Working at time of inspection, Regular maintenance/service is recommended for efficiency air quality and to control recessive humidity in winter.</i>
<b>Electric baseboard/fan heaters:</b>	<i>Sample tested and working. No heat source in main floor bath at rear main laundry room at basement laundry. This is a comfort issue and will increase risk of pipes freezing near exterior walls. Heat source is required typically all rooms on exterior walls. Heater in rear porch area would not operate. Did not determine purpose or if original thermostat in kitchen is operational. Recommend having electrician review/ correct as required.</i>



<b>Electric radiant heat:</b>	<i>Working at inspection. Thermal image camera showed in floor heat operational.</i>
-------------------------------	--



*Read this.....*

Forced air furnace heat exchangers sometimes crack on first use following a Summer of idleness.

On most furnaces, only a portion of the heat exchanger is visible without dismantling the unit. Home inspectors do not take furnaces apart, this can restrict the inspection. The latest high efficiency, direct vent furnaces are virtually inaccessible to see the heat exchanger, etc. except by qualified heating technicians.

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Fault conditions cannot always be discovered by running the unit for a few minutes. You may, for instance, have to use the device for several hours for the fault condition to occur.

Regular, annual servicing is essential to maintain efficiency and ensure longevity.

Examine and where necessary, change and or clean all air filters in furnaces, heat recovery ventilators and air exchangers on a monthly basis. Dirty or clogged filters will significantly reduce the efficiency of most heating and ventilation systems and in extreme cases may be a fire hazard.

**Always turn off** electronic air filter or air exchange systems before attempting any maintenance.

Do not run Heat Recovery Ventilators (HRV's) in the Summer or when the air conditioning is on. These units will empty the conditioned air from your house while bringing in more humid air for the air conditioning to work on.

**Any** fault conditions noted relating to solid fuel appliances, create a potential fire hazard. **Repairs must be treated as a priority.**

**Fuel fired appliances present a potential source of carbon monoxide. CO Detectors located either near the bedrooms and or where a bedroom shares a wall with a garage, or shares a wall with an attic space that abuts the garage.**

## Heating

Heating systems are generally designed specifically for each home or unit and take into account such factors as climate, orientation, insulation, windows, skylights and so on. It is beyond the scope of the home inspection to determine the adequacy of any heating system and the inspection therefore relates to installed components, their current condition and life expectancy.

## Fuels and Costs

Efficiency rating for various fuels are often contentious, as manufacturers will always create ideal, controlled, test conditions which you are unlikely to replicate at home.

The decision to change heating fuel for one that appears to be less expensive - from electricity to natural gas for instance - seldom takes into account the capital cost of the new equipment and its installation.

Installing a new gas furnace and the associated ducts (to replace baseboard heating for instance) will cost several thousand dollars. The fuel cost saving may not be as significant as the furnace manufacturer would have you believe and it may be ten years or more before you break even.

At this point the furnace is two thirds through its life expectancy (typical furnace life is about fifteen years). So now in five years you have to replace the furnace (again).

Of course there are other issues to consider - ducts allow you to install central air conditioning and/or an air exchange system of some sort. A gas furnace may be easier to control and may give you a more even heat throughout your home and so on.

Finally - remember that high efficiency furnaces cost a lot more than mid efficiency ones. So - if you have a flue pipe already - you might find its more cost effective to buy the mid efficiency variety. Typically the efficiency difference is about 5%. If your heating bill is \$1,000 a year and you save 5% - that's just \$50. So if the furnace costs \$1,000 more - it will take you 20 years, just to break even.

Don't rush into buying the latest technology or the most popular fuel of the day. Do the math - you may find its not quite as appealing as you first thought.

Be aware that other peoples heating bills can be meaningless. The person you are buying from may be a little old lady who keeps the heat at 80 degrees throughout the winter and is home all day. You on the other hand, may be an outdoor exercise family, who are at work all day and hate it hotter than about 65!

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You will have to live there a year before you have a good idea of your energy costs. Use previous bills as a rough guide only.

Our cost calculator at the end of the heating section will help you compare different fuel system costs.

## Electric heaters

Baseboard or fan heaters are common in many homes. Be sure that furniture and drapes are kept well clear. Do not use outlets that allow wires to drape across the heater surface.

**Radiant heat** is returning as a fashionable item, having fallen from favour for many years. Most installations use hot water pipes however electric installations are returning to popularity in many areas.

## Furnaces and boilers

The main difference between furnaces and boilers is that furnaces heat air, where boilers heat water. The second difference is that furnace systems have ducts to circulate the air throughout the building (which you can also use for air conditioning), whereas boilers need pipes and some sort of radiant surface to spread the heat.

With a boiler system, you will need separate ducts and an air handler (a big box with a fan in it) to use a central air conditioning system.

The **heat exchanger** is a core part of any furnace or boiler system and its failure usually means you have to replace the furnace or boiler. Some replacement heat exchangers are of course available, however the cost of replacement, especially when you take into account the labor, generally makes buying a new unit a better option.

The new unit will be more efficient and most come with some sort of manufacturers warranty - usually five years.

In most cases only a small part of the heat exchanger is accessible to the home inspector, who will only comment on the visible areas. Annual inspections and servicing of all heating and cooling devices is highly recommended, both to ensure your safety and to provide the longest service life of the device.

## Combustion air supply

Furnaces, boilers and other devices (water heaters for instance) that burn fossil fuels, need air to burn. In older homes this was provided through open basement areas and ill fitting doors and windows.

Today's homes are more air tight and indeed older ones that have been upgraded, need a separate combustion air supply. This can be as simple as a pipe open to the outside, that has one end near the furnace or boiler. Without this essential air supply, fossil fuel burning devices may create a carbon monoxide problem in your home.

Some direct vent, high efficiency furnaces have a combustion air supply built in. Remember though that if you have a gas or oil fired water heater (that is not direct vent), as well - it will still need the air supply.

## Heat pumps

Heat pumps work by taking small amounts of heat from the surrounding air, water or from the ground, over and over again. The small amounts are then transferred into your home. Gradually, the heat builds up and the house gets warm.

Most systems allow you to reverse the process in summer and thus get air conditioning.

Heat pumps are very efficient however compared say, with a furnace and air conditioning - the capital costs are very high. If you are considering a heat pump system, be sure you intend to live in the house for many years to gain the full benefit. In some homes, heat



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pumps are tied in with electric or other higher running cost, heating systems.

Heat pumps need the same servicing as other primary heating systems. You would be well advised to take out a maintenance/service agreement for this type of system. Repairs need a specialist technician and are generally not cheap.

**Heat recovery ventilators (H.R.V.s) and air exchangers** provide controlled methods of allowing fresh, outside air into your home while simultaneously exhausting stale air.

They can make a significant contribution to the reduction of humidity in winter. Generally its not recommended that you use these devices in the summer months as they can increase the humidity by pulling in outside air, acting in direct opposition to any air conditioning you may have.

## Oil tanks

Oil storage tanks rust from the inside - out, as well as from the outside - in. The problem is that oil floats on water, no matter what the proportions. So condensation, which is formed whenever the tank is filled, ends up on the bottom of the tank, rusting the metal.

Many jurisdictions have recently (within the last three or four years) adopted new regulations to cover the continued use of oil tanks, especially underground ones.

Most insurance companies will not insure homes with exterior tanks more than 15 years old and interior ones more than 25 years old. If the tanks age cannot be determined - typically you wont get insurance until the tank has been replaced.

Underground tanks can leak for many years without any noticeable increase in fuel usage. Any leakage is an environmental problem, which can be extraordinarily expensive to clean up.

Fuel oil suppliers are no longer permitted to re-fill unregistered underground tanks, nor any tank connected to a system that does not comply with current legislation. There is a schedule in many areas for the removal and replacement of underground tanks with start dates for older tanks as soon as October 2006.

Visit [www.tssa.org](http://www.tssa.org) for more information.

**Oil piping** must be protected where it is exposed between the oil tank and the furnace or water heater.

## Humidifiers

Whole house humidifiers, as opposed to portable ones, can be a source of bacteria, mold and corrosion. The rotating drum style are particularly susceptible to this sort of problem if not maintained on a regular basis and can be a significant health hazard especially to the elderly, children and anyone suffering from any sort of respiratory illness.

The newer style "flow through" ones that work on a spray system, instead of a reservoir, are better although they use more water.

The need for a humidifier depends on your life style, the features of your home, (hardwood floors for instance) and whether you own a Steinway grand piano! In many cases - your normal living - breathing, taking showers, cooking and so on will generate sufficient moisture to keep your home comfortable.

A good average humidity is between 30 and 40%. You can buy an inexpensive humidistat from any hardware store. If you find your constantly being zapped by static electricity, its likely that you need some of the additional moisture that a humidifier is designed to provide.

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## Insulation and Vapour Barriers

### Description

<b>Attic/roof spaces:</b>	Fiberglass batt insulation is used in the attic or roof spaces.
<b>Approximate 'R' value:</b>	R32+. R 40 + is typical with newer house construction.
<b>Basement/crawl spaces:</b>	Most insulation is visible or can not be seen.
<b>Approximate 'R' Value:</b>	R 17 to 20 is typical for wall insulation in newer construction.
<b>Vapour/air barriers:</b>	Plastic is used for a vapour barrier. Moved small amount of insulation to view by access hatch.

### Limitations

<b>Insulation/vapour barrier inspection limited by:</b>	Limited or no access to, attic, crawl spaces, floor spaces, Ventilation from soffits into attic not confirmed, Area of ventilation not measured, doing so could damage insulation/ finishes/ electrical etc. Attic/crawl space inspected from access hatch.
<b>No access to:</b>	Wall space, Cathedral ceilings, Areas hidden by storage.

### Attic/roof spaces .....

<b>Access hatch:</b>	Increase hatch cover insulation/weather strip for efficiency.
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### Walls .....

<b>Insulation:</b>	Not visible.
<b>Vapour barrier:</b>	Not visible.

### Basement/crawl space .....

<b>Insulation:</b>	Exposed foam insulation(common) Fire/ health hazard if burning. Recommend covering or remove(see info). Typically framing and insulation is installed in front of foam insulation when finishing walls/ basement. Insurance may be an issue if left exposed.
--------------------	--



<b>Vapour barrier:</b>	Recommend ensuring vapour barrier is properly sealed to reduce risk of damaging condensation developing in wall cavity's.
------------------------	---



*Read this.....*

Insulation is subject to the 'Law of Diminishing Returns' which dictates that 'more' is not necessarily 'better'. In many cases if you add more insulation, you'll make little difference to heat loss and it may be many years before you recover your capital costs.

In basements and crawl spaces, be sure that insulation is at least three or four inches above the floor. In that way, if there's a flood, the insulation should stay dry.

**Exposed foam insulation is a fire and smoke hazard and should be removed or at least covered with drywall.**

Poor ventilation in attics, basements and crawl spaces is a major cause of moisture damage to framing, trusses, drywall and sheathing. It is also a significant factor in the production of molds and mildew.

Poor insulation - especially at roof to exterior wall edges - is a major contributor to ice damming.

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All walls, floors and ceilings that separate heated space from unheated space or the outside air should be insulated. However this may be difficult to determine where such areas are finished.

## Insulation and vapour barriers

### What is R value?

Look in the hardware store or talk to anyone about insulation and it won't be long before the phrase R value comes up - usually followed by a number. You'll see insulation bales in the store with R12, R20, R40 and so on - written on them.

R value is the number that you get when you test an insulation materials resistance to heat transfer across its width - in no air movement at 70 degrees Fahrenheit. So - for instance an inch of glass fibre will give you a number about 3.4.

Using this information we can now see that if we put six inches of glass fibre in a wall - we'll get an R value of about 20. ( $6 \times 3.4 = 20.4$ ). Different insulation materials have different R values - settled, blown in, cellulose for instance has an R value of about 3.7 per inch, expanded polystyrene is about 4.0 per inch and so on.

Of course we can't usually replicate the testing conditions in the real world - so although the insulation in your attic may be declared as R40 - the likelihood is that given the surrounding conditions - it's something less than that.

Making any insulation wet or allowing any air movement (between poorly installed batts for instance) - reduces its R value significantly.

Years ago when fuel was cheap - or often in the case of wood - free - we were less concerned about insulating our homes than we are today.

As this revision is written, crude oil costs are topping \$68 a barrel with analysts suggesting that \$70 is on its way! Clearly - whether you live in a hot or cold area of the country - insulation will be a major factor in reducing your heating or cooling costs. (All figures in US dollars).

Most modern homes have adequate insulation and it's one area where the "more is better" maxim doesn't necessarily apply.

### Should I add more?

Insulation heat resistance levels are subject to the Law of Diminishing Returns.

Suppose you have an uninsulated home and you add \$1,000 worth of insulation - you might save \$200 on your heating or cooling costs. Now you add another \$1,000 dollars of insulation and to your horror you discover you only saved \$225.

How could this be? - well the first \$1,000 saved you 75% of your heat loss but the second \$1,000 only saved you 75% **of the 25%** you didn't save in the first place!

So be careful about adding lots more insulation - often it will be many years before you recoup the capital cost by way of heating or cooling loss saving.

Your home inspector will have a good idea of the value of your current insulation and will advise you about the benefits of upgrading.

## Foam insulation

Foam insulation - often known generically as Styrofoam - is widely used as an insulator for walls, floors and (less commonly) ceilings.

Most installations in habitable areas must be covered by some fire resistant material. Often drywall is adequate.

Any exposed foam insulation can be a fire hazard and when burning may give off a thick toxic smoke. We recommend that all exposed foam insulation be removed and replaced with a different insulator or covered with a fire resistant material.

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## Ventilation

Ventilation of attics, crawl spaces and other largely uninhabited areas is an important factor in the reduction of dampness, humidity and rot. Damp, airless places often encourage mold, mildew and other problems.

Poor or inadequate ventilation can be a contributory factor to rotting wood products and rust on oil and water storage tanks.

## Vapour barriers

Vapour barriers are variously kraft paper, polyethylene or incorporated into the insulation material. (Styrofoam for instance).

Vapour barriers must always be on the warm side of the insulation - so if you were standing inside your home - the sequence of materials in the wall would be:

Paint (or wallpaper)  
Drywall (or plaster)

### Vapour barrier

Insulation  
Wall sheathing  
Tar paper/Tyvec/Typar etc.  
Exterior veneer - bricks or vinyl for instance

We also use vapour barriers to protect wood products from moisture. One of the most common areas is where wood framing is installed on concrete floors, especially in basements. All newer homes should have a vapour barrier under the bottom plate of the wall where it is in contact with the cement floor. In some areas, preserved wood or cedar (which has natural oils to prevent decay) may be acceptable.

**Vermiculite** insulation may have asbestos content. We recommend that where this material is found, a sample be laboratory tested and where necessary professionally removed. **Urea Formaldehyde Foam Insulation (UFFI)** was used in many homes, mainly as a wall insulation. In many jurisdictions it is now considered to be inert. It is no longer used in residential applications.

## The inspection

In most cases the inspection of attic or knee wall areas will be carried out from the access hatch. Many insulation materials are a health hazard if inhaled and moving about in these spaces can compress the existing materials reducing its effectiveness.

Entering these spaces will always be in the inspectors absolute discretion.

Generally speaking, wall insulation is not visible. However uninsulated foundation walls are a major source of heat loss, particularly in older homes.

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## Plumbing

### Description

<b>Supply:</b>	Public.
<b>Waste:</b>	Public, apparent.
<b>Service pipe (into house):</b>	Copper.
<b>Supply pipes (inside house):</b>	Copper.
<b>Colour of valve:</b>	Brass.
<b>Main shut off valve:</b>	Shut off valves not operated.
<b>Water flow pressure:</b>	Good. Approximate size of supply, in diameter, 3/4". Increasing supply lines to 3/4 inch where possible will increase flow of water.
<b>Waste pipes:</b>	Plastic, most not visible.
<b>Water heater:</b>	Electric.
<b>Likelihood of failure within two years:</b>	Medium. 2010/ 11 apparent age. Average life span 3-6 years.

### Limitations

<b>Plumbing inspection limited by:</b>	Hot water heater not tested.
<b>Items not inspected:</b>	Septic system, Spa/hot tub, Swimming pool, Well and water treatment systems, Sauna, Concealed plumbing, Main valve not operated, Garbage disposal systems, Lawn services and fire sprinkler systems, Adequacy/continuity of water supply not determined, Storage/ finishes limits view. Main clean out/ Determine if backflow prevention is in place.

### Conditions

<b>Supply piping in house:</b>	Risk of freezing noted in areas. Supply should not be ran in exterior walls. Noted at bar sink.
--------------------------------	---

<b>Waste pipes:</b>	Risk of freezing in areas. Should not be place in exterior walls. S trap noted at main vaniti indicate poor venting of waste system. May cause siphoning of water in trap, which could allow sewer gases into house(potential health hazard). Correction is recommended. Water appeared to drain adequately. Monitor. Main waste cleanout was not located although this is very common due to subfloor/ flooring etc. is a good practise to have access in case required to access due to blockage etc. No comment on main waste/ supply pipes from the house to the street can be made. For further evaluation a scope(camera) of the main waste could be performed( some plumbers have cameras) to asses the condition of the pipe.
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**Floor drain:**  
**Whirlpool tub:**

*Not located.*

*Filled and ran. A wall switch is only in place. If no air switch is located at tub a wall timer is typically required for safety. Recommend having electrician review and correct as required. Did not determine if jet tub was on a dedicated electrical circuit as required. Have elutriation confirm.*



**Bathroom fan(s):**

*Ensure all exhaust fans/dryer ducts are exhausted to the exterior. Proper ducting of exhaust fans not confirmed/ visible. Install fans in all bathrooms. (if not in place).*

**Exterior tap:**

*Risk of freezing.*



*Read this.....*

**Hot water can scald in seconds. Be sure the thermostat(s) on your hot water tank(s) are set to a maximum of 125 degrees Fahrenheit.**

Some plumbing parts are concealed and cannot be inspected.

Note that some leaks are only revealed under specific circumstances. You may, for instance, have to weigh over 175 pounds **and** stand in the shower for ten minutes before the leak condition occurs. Often there are clues to previous leakage (stains on ceilings and so on) but in the absence of this evidence, future leaks are almost impossible to predict.

Sump pump discharge pipes are often underground. In Winter it is generally impossible to determine their efficiency. Pipes occasionally freeze and a working pump is not necessarily an indicator of a clear discharge.

## Plumbing

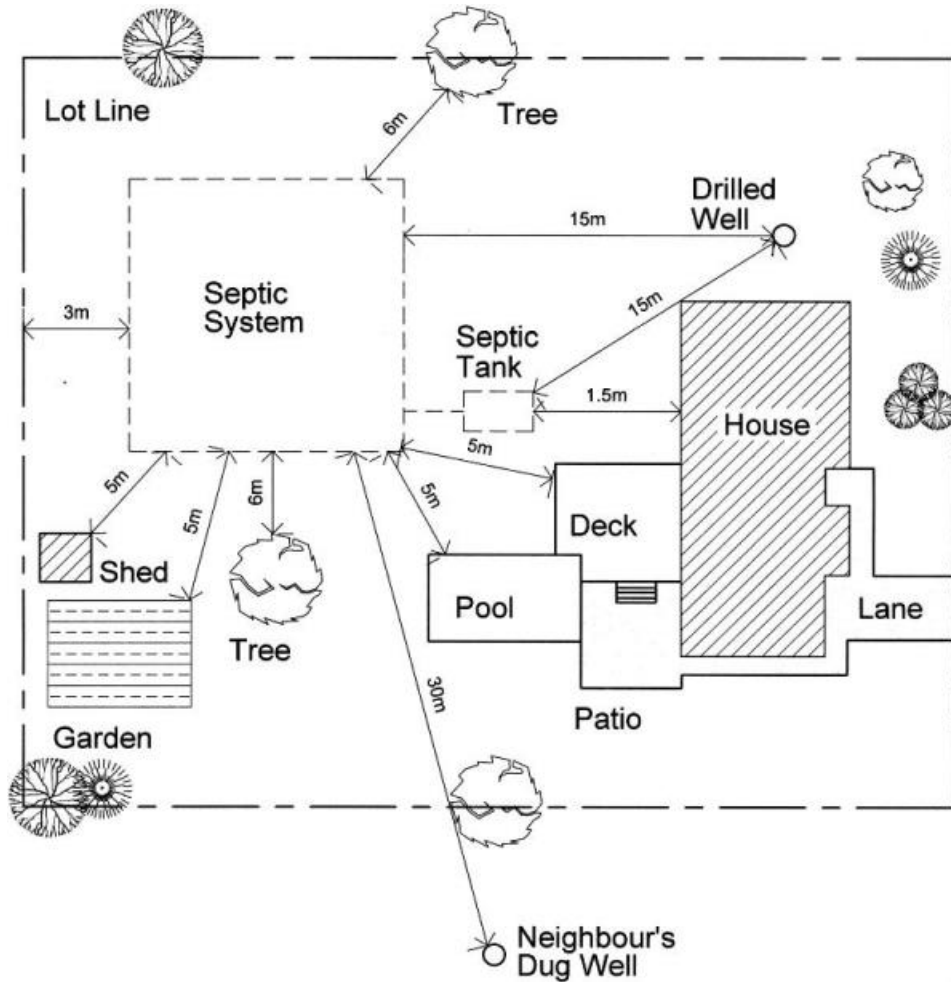
**Septic systems** do not form part of this inspection. Any comments in the report (good or bad) are not intended to be an indicator of any septic system's viability, life span or even current condition. We recommend that all septic and other non-municipal drainage systems are professionally inspected before you proceed with your transaction.

The drawing shows approximate and most common clearances required and are **intended only as a guide**. Consult your septic engineer before proceeding.

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A house needs a water supply, a waste system and venting to allow air back into the pipes as the waste flows out.

## Supply

Water is supplied to the building by the Municipality or via a private well, lake or collection system.

Municipal water is generally trouble free, chemically treated and at a reasonable pressure but you have to pay for it. Generally speaking, you can't increase the pressure. If the pressure appears to be low, check that the main valve's fully open and that shower heads or faucet filters aren't clogged.

There is also no guarantee with Municipal water that you'll get what you pay for or expect. Residents in Walkerton found that out when inadequate treatment caused several deaths and much sickness.

Private wells, collection systems or supplies from lakes are free but rely on electric pumps, pressure systems or other mechanical supply methods to get the water to the faucets. The question of whether the water is clean, drinkable and free from bacteria and coliform (we call it "potable") is firmly in your court. We recommend that you always take your own sample for testing before proceeding. You can use it to compare with results from other sources - owners, Realtors, previous tests and so on.

Regular testing (once you get occupation) of private water supplies is also highly recommended.

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Unlike Municipal water supplies, the water pressure can be increased typically to a maximum of about 60 pounds per square inch.

The adequacy or continuity of any private water supply does not form part of this report. Your inspector may have information about local conditions.

## Waste

Waste systems are also public (sewers) or private (septic systems and holding tanks). You pay for Municipal waste disposal (usually in your taxes).

Pipes that join your home to the sewers will almost always be your responsibility from the house to the lot line. Beyond that, the Municipality may pick up the bill if there's a blockage or other problem.

You also pay for waste disposal though your septic system (because you have to have it pumped out every few years), or you have to pay to have a holding tank emptied every month or so.

The frequency with which you should have a septic tank emptied is a matter for a large scale discussion in another forum. The views are as diverse as the styles of system available. Most knowledgeable commentators involved in the field, will suggest that once every two or three years is adequate. Much depends on use though - so if you have a family that likes to party and you have fifty guests every weekend - expect to pump it much more often.

We strongly recommend that all private waste systems are professionally examined before you proceed with your transaction.

Remember that both supply and waste lines are concerned (buried) service connections. The inspector does not inspect or evaluate buried and or concealed supply, drain, waste lines and systems.

## Vents

The waste side of all plumbing fixtures (sinks, basins, showers and so on) must be properly vented. The vent is an additional pipe that allows air back into the system as water/waste is discharged. Without adequate venting, the traps can be siphoned clean of water, resulting in sewer smells and gasses entering the building.

Auto vents are small lengths of pipe with a valve and a low tension spring inside. They replace the need for a normal vent pipe, which may be difficult to configure, especially in kitchen island units or basement bar sinks. Auto vents are not permitted in many jurisdictions.

## Pumps

Water pumps for private water systems are either jet pumps or submersible. The test is easy - if you can see the pump beside the pressure tank - it's a jet pump.

The old days of having to prime pumps after a power out, by pouring water into a hole in the top, have largely gone. New style pumps are self priming and only require connection to a power source.

## Pressure tanks

These provide the pressure at the outlets (faucets, showerheads and so on).

Most can be adjusted to provide water pressure at the outlet up to 60 pounds per square inch. At a shower, this will be significant and may remove skin! Unless you have an understanding of the process and a compressor - it's a job for a plumber.

A pump that continually cycles - that is - as soon as you turn on a faucet or flush - it starts or where the shower gives you the water in short spurts, is an indicator that the pressure tank has become waterlogged. The air that should be in the pressure tank has leaked out and the tank must now be emptied and re-pressurized.



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## Water heater

Many water heaters are rental units - often it depends on your location. If you have a rental unit, the supplier takes responsibility for any repairs or replacement that may be required.

Generally, if you intend to occupy the home for five years or more - it's more cost effective to buy one.

Many hot water heaters have the temperature set too high. Hot water at 140 degrees Fahrenheit (a common setting) will scald a child in seconds. Most pediatric commentators recommend a maximum temperature of 125 degrees Fahrenheit. It's a common misconception that you need the water really hot for a dishwasher to be efficient. All modern dishwashers have an internal heater that will bring the incoming water temperature up to the required level.

## Whirlpool tubs

Whirlpool tubs either have series of air jets all over the base or water jets at the sides and ends that circulate the water in the tub. Most of the jets are self draining although not completely so and therein lies the problem. Some water gets left behind and it grows bacteria and disgustingness! Then the next time you use the tub - it all comes out to join you!

The solution is to clean the tub and pipes. You can get special cleaners or just use a weak solution of bleach. Fill the tub and run it for a few minutes - drain it and you ready to go again in a clean tub.

A weak solution, used about once a month, won't hurt septic systems either.

The power that feeds the spa or whirlpool tub has to go through some type of ground fault protection. Access to the motor and controls is also important.

## Sump pumps

Sump pumps are used mainly in rural housing, although some older parts of cities still have them.

They pump water collected by the footing level perimeter drains - out to a ditch, French drain or other soakaway. There are two basic styles of pump - column or submersible. Column pumps are susceptible to falling over and jam easily. Submersible pumps are better and are generally more powerful.

The flexible sump pump hoses supplied with many pumps are useless and should be replaced with ABS rigid pipes. Ensure that in cold climates - any pipes that extend outside are a minimum three inch diameter and have a continuous slope to the discharge point.

Discharge points must be kept clear. Many are not visible during the inspection and a working pump does not necessarily indicate a clear discharge.

Be sure your house insurance covers sump pump failure both as a result of a mechanical defect and a power failure. Most policies don't include it as a matter of course - you have to ask for it.

## Perimeter drains (a.k.a. "tiles")

These are the continuous, perforated pipes at the footing level, that surround most country homes and some in the city, which collect water from ground sources, window wells and some downspouts. The pipe either delivers the water to the sump, where a pump delivers it to a drainage area (a ditch for instance) or by gravity to a ditch or lower drainage area.

In city homes - the pipe delivers the water by gravity to a storm sewer.

Blocked perimeter drains can be a major factor in leaking basements. The white efflorescence at the bottom of foundation walls in basements and crawl spaces is often an indicator of this problem. In some cases it may be possible to clean out the pipes, however if replacement is required excavation can be costly.

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Many older homes have terra cotta perimeter drains. Most of these have collapsed, at least in part and will need repair or replacement. A home inspection will not determine the condition of the pipes although interior dampness and efflorescence at the base of foundation walls may be an indicator of a problem.

## Bathroom fans

We recommend exhaust fans for all bathrooms. Discharge pipes must be insulated in attics and must discharge outside the building. Do not allow discharges into garages either. We further recommend clockwork timers. These allow you to turn on the fan for (say) 30 minutes even though you're leaving for work. Simple switches mean that you either don't turn the fan on at all or only for a short period, in which case the condensation will still be in the room. Alternatively, you leave the fan on, in which case it will gradually empty all the heated (or air conditioned) air from the building while you're out.

Some new fans are available with a humidistat. These run only when the humidity is above a pre-determined level.

## Lead pipes

Lead pipes are installed in many Municipal water systems, so although there may be no sign of lead piping in your home, it may be supplied through lead pipes under the street.

**Even small amounts of lead can seriously damage your health and in particular the development of fetuses and small children. If you are or intend to become pregnant or have any other health concerns, you must have the water tested for contamination and contact your health professional for advice, before proceeding with your purchase.**

The matter of lead piping in the street is beyond the scope of the home inspection.

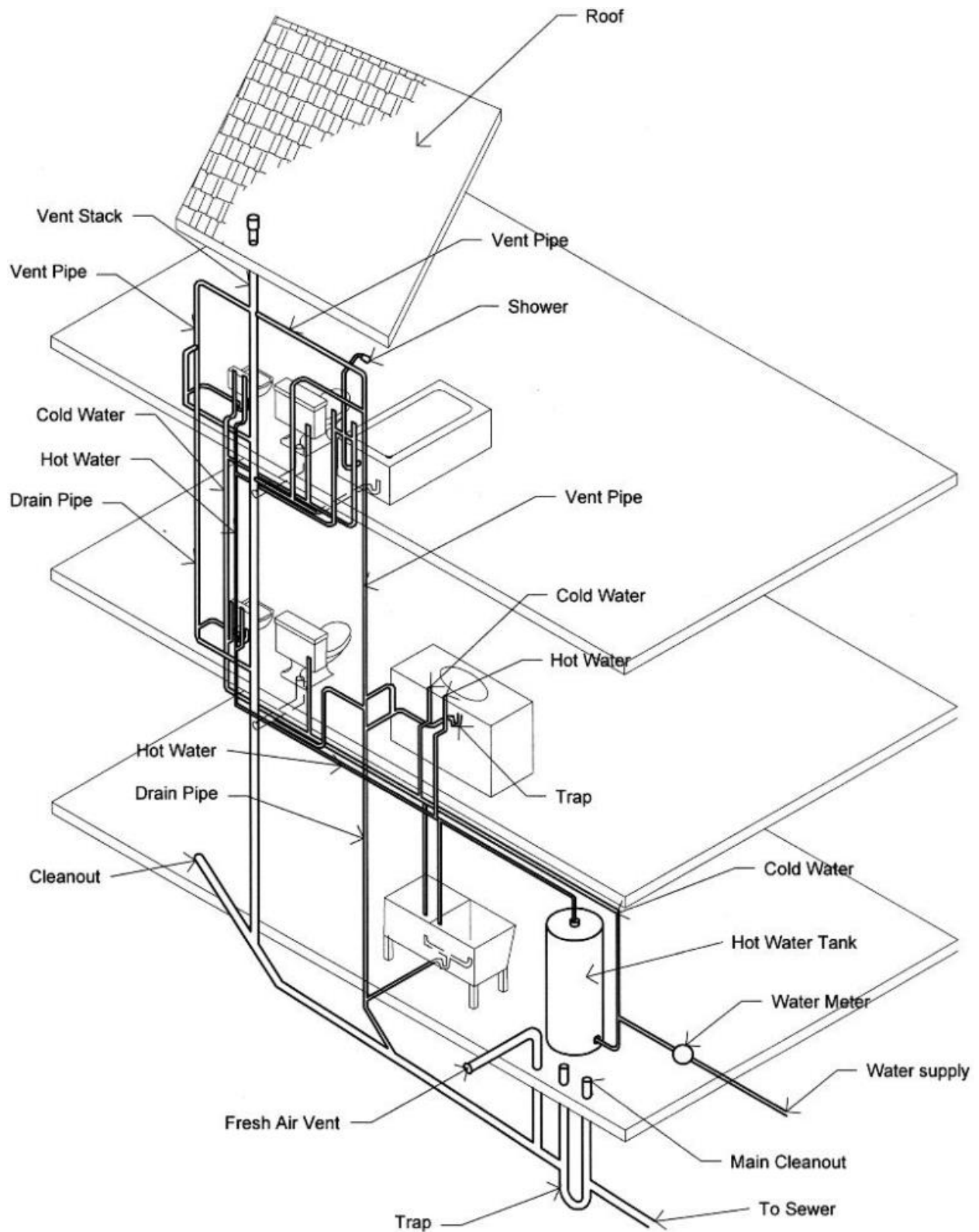
## Bathroom Water Issues

Frequent periodic maintenance of caulking and grouting of tiles and tub surrounds or other materials on the wall of tiles and tub surrounds or other materials on the wall surrounding tubs and showers is mandatory. If the words caulk or grout are noted in your report - consider this an immediate issue. It is vitally important to seal these vulnerable areas against water infiltration.

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# Ashley Home Inspections

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## Interior

### Description

<b>Major floor coverings:</b>	Hardwood, Carpet, Ceramics/marble.
<b>Major wall coverings:</b>	Plaster/drywall.
<b>Major ceiling finishes:</b>	Plaster/drywall. Textured/stipple.
<b>Windows:</b>	Casement.
<b>Doors (exterior):</b>	Metal.
<b>Fireplaces/wood stoves:</b>	Electric fireplace.

### Limitations

**Interior inspection limited by:** Appliances including central vacuum not tested, Carpets not examined, Indoor air quality not determined, Chimney draft adequacy not tested, Building code/ bylaws for building/renovations/apartments/ window egress, fire,party walls/ etc. not confirmed. Consult with local building inspector for codes/ bylaws/. requirements. Storage in basement, Furniture, Paint/wallpaper, Posters/pictures, Drapes/wall coverings, Sub-floors.

**Approximate percentage of interior foundation wall not visible:** 100 %.

### Conditions

<b>Floors:</b>	Minor gaps noted on wood flooring(possibly water damage) at right exterior wall. No elevated levels of moisture detected. Monitor or consult with owner on possible cause.
<b>Ceilings:</b>	Water damage(apparent). Minor stain noted on kitchen ceiling. No moisture detected, monitor, consult with owner or have contractor review for further evaluation(see roof re: tar patch). Repairs to stipple ceiling are typically difficult to perform cosmetically without removing stipple or spraying over entire ceiling. Recommend consulting with a contractor for further evaluation.
<b>Windows:</b>	Older windows on family room painted shut. Clean/ service windows as required as regular maintenance.
<b>Doors:</b>	Adjust as required, bind/ rub.

Please note that there is often difficulty in determining thermal seal failure. Varying temperatures, lighting conditions and even the weather can influence the available evidence on any given day.

### Stairs

<b>Stairs:</b>	Door opens over stairs, safety hazard( typical for walkout door). Handrails recommended at walkout stairs for safety. Stair rise not uniform, potential trip hazard.
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**Note: All stair/handrail defects are potential hazards and must be repaired immediately**

## ***Wood Stoves or Fireplaces***

***Fireplaces/wood stoves:***      *None.*



***Read this.....***

Security bars at basement windows can make escape at the moment of disaster, difficult if not impossible. Be certain they can be removed instantly if necessary. If you're concerned about security - alarm systems are a better idea.

Squeaks in floors are not uncommon. The level of repair required can seldom be determined during a visual inspection.

Water infiltration into below grade areas can be difficult to detect without the benefit of historical clues. (Stains, mold, efflorescence and so on). Often basements and/or crawl spaces will only leak under specific circumstances and unless those conditions are re-created at the time of the inspection, future problems may be impossible to predict.

We make no comment about interior layout or design, except where there is a perceived safety issue.

Uncertified wood stoves (not C.S.A. approved) can be a significant fire hazard and should not be used unless there is a clearance all round of at least four feet from anything combustible. You may find your insurance company will refuse cover if you have this type of stove.

A Wood Energy Technical Training (WETT) technician must be used to examine and clean all solid fuel burning appliances (fireplaces, wood stoves etc.) and their flue pipes. He should issue a compliance certificate **before you use the device.**

Moving to your new home in Winter may make attention to eavestroughs, downspouts, grading and so on difficult, if not impossible, to achieve until Spring.

**This does not reduce the potential for leakage. Consider these items a priority as soon as the weather permits.**

## **Interior**

### **Handrails and stairs**

Handrail (railing) requirements vary depending on your geographical location.

As a general rule, railings are required:

On landings, decks or balconies more than 24 inches above grade or any adjacent level. (30 inches in U.S.)

On the open side of stairs where the total rise is more than 6 steps. (30 inches in U.S.)

On both sides of any stairs where width is 43 inches or more.

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Handrail heights to be between 31 and 36 inches. (34 and 38 inches in U.S.)  
No breaks in railing that prevent a continuous hand hold.  
Spindles close enough together to prevent a 4 inch sphere passing between them.

The rules are many and varied. Consult your local building official for any specific code requirements.

Stairs must have a uniform rise/run ratio. This means you cant have a series of steps that are all 7 inches high and then have the eighth one 10 inches (or 6 inches).

In many older homes the railings do not comply with today's rules and must be upgraded.

**Stair and handrail deficiencies are a significant safety hazard and repairs or upgrades must be treated as a priority.**  
**Smoke alarms and carbon monoxide detectors**

Install new smoke detectors to your home. There are two types available:

## **Photo-electric and ionizing.**

**Photo-electric** detectors work when smoke deflects a light beam inside the unit onto a detector.

**Ionizing** units work by having a tiny radioactive plate inside that uses smoke particles to create an imbalance in a small electric circuit, thus tripping the alarm.

Units powered by the main electrical supply do not need battery changes but may not work in the event of a fire in the electrical system.

Battery powered units always work but you have to renew the batteries. (Annual battery replacement is recommended).

So it makes sense to have both sorts or buy ones with battery backup. But remember that you still have to change the battery annually.

**Carbon monoxide** detectors are recommended in all homes that burn fossil fuels - gas, propane, oil, wood and so on. Most commentators recommend that they are installed at knee height near the sleeping area. Remember to install one in the basement (at knee height) if you have bedrooms there or kids sleeping over in the lower level.

Replace all smoke and carbon monoxide detectors that are more than about five years old.

## **Basement windows**

Installing bars at basement windows as a security measure is a good idea as long as they can be opened quickly in the event of a fire or other emergency.

In a smoke filled room, you will only have seconds to escape and you are unlikely to be able to find a padlock key, insert it and open the bars in the available time.

To see how difficult it is - stand in front of the bars, take one breath, close your eyes and see how far you get before you have to breathe again!

If you are really worried about security - install a monitored alarm system.

## **Walls and ceilings**

Typically there will be minor areas of damage, especially in garages. The inspection will identify any major visible faults and any that need immediate attention however it will not include a comprehensive list of all drywall defects, such as nail pips and seasonal movement cracks.

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## Basement or crawl space leakage

Most basements, crawl spaces and other below grade areas will leak at some time during their lives. Often regular attention to eavestrough, downspouts, grading and other exterior drainage issues will keep moisture entry to a minimum. Occasionally, leakage will only occur at specific times of the year or under certain circumstances. Inspectors will always take great care to visually check all accessible below grade areas for signs of dampness or leakage and exterior drainage and grading systems for inadequacy. In the absence of specific evidence however, future leakage may be impossible to predict.

## Fireplaces and wood stoves

**All fireplaces and wood or other solid fuel burning devices must be examined and cleaned annually by a certified professional. This includes flue pipes and chimneys.**

**Please note that the cleaning of flue pipes and chimneys is not a job for a homeowner. In the event of a fire, unless you can produce some evidence of professional involvement, your insurance company is likely to be less than impressed!**

We recommend that all such work be carried out by Wood Energy Technology Trained (W.E.T.T.) personnel or equivalent.

Most insurance companies will require W.E.T.T. certification of all wood stoves and many fireplaces to grant you the full cover from your policy.

The issue of combustible clearances - the distance between the wood burning device and any combustible material - is seldom a matter of visual interpretation, although that's part of it. Inspectors will be able to make a reasonable determination of the issue only if the manufacturers data plate for the device is accessible and readable, (many aren't) and the construction of the adjacent walls is obvious. (The poured concrete of a foundation wall clearly would be non-combustible).

Its a common misconception that drywall is non combustible. Certainly some types of drywall will allow a certain fire resistance however with wood burning devices, that's only part of the equation.

A wood stove will transfer heat across the drywall depth and into the wood studs behind. A device that is too close to a wall and is run all winter or even for a few days continuously, will allow a build up of heat in the wood studs (behind the drywall) that may reach the point of spontaneous combustion.

This problem is exacerbated when the common "zero clearance" or insert fireplaces are used on a continuous basis. These units were never designed to be used in this way. They are for occasional use, typically for a few hours at a time.

**Buckled heat shields, cracked fire bricks, poor combustible clearances and other deficiencies are fire hazards and the devices must not be used until all faults are professionally repaired.**

Most fireplaces will create a net heat LOSS when in use. They draw heated air from the building to burn and then throw 75% of the heat they generate, up the chimney. Clearly you will feel warmer near the fire and the furnace will make up the difference but don't ever believe that using an open fireplace will make a contribution to your heat, because probably - it wont!

## Moisture Damage

The kitchen and bathrooms are the two most used rooms in a home. These areas also share other building systems including plumbing, electrical and heating along with built-in features.

Moisture damage is commonly found in a bathroom or kitchen space. Both areas are prone to many types of activities that increase moisture creation in a home, such as cooking, washing, bathing etc.

Both of these areas also require adequate ventilation to reduce and control moisture build up.

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## Gas and electric Ranges

The use of gas and electric ranges requires that adjacent framing and finishes and cabinetry be protected. a vertical clearance of 30 inches or greater must be provided between the elements of the burner of the range and materials which are located directly above. This may be reduced to 24 inches where the cabinets above are non-combustible and protected with sheet metal or protected by a range hood.

All wood or solid fuel burning devices are potential fire hazards unless properly maintained. W.E.T.T. certified contractor to test, inspect, clean and certify safe all wood burning devices and flue pipes before use.

## ***Adequate combustible clearances not visible or confirmed (if fossil fuel usage in place)***

***Smoke alarms and carbon monoxide detectors:*** *Install a smoke alarm to each floor/level, Install at least one battery operated smoke alarm, Renew any units more than five years old, **Test all alarms monthly.** Install at least one carbon monoxide detector if installing a fossil fuel burning appliance. I.e: wood or propane.*

***Basement/crawl space water penetration:*** *Damp odor detected. Higher than normal moisture levels(8 to 14% would be considered normal) in sub floor. 20 to 35% moisture detected. This would indicate seepage from grade surface water. Concealed damage may exist. Odors from dampness may be difficult to remove without replacing sub flooring. Concealed water damage or potential mould/mildwe( potential health concern)may exist. Odors from dampness may be difficult to remove without replacing sub flooring.*



***Leakage/efflorescence/dampness noted at:*** *Left side front room in basement. See below(exterior re: walks, gutters and grading)for improvements or have basement leak specialist/ restoration contractor review for remedial correction/ repair. Installation of gutters/ downspouts and proper extensions. Replacing(properly grading) asphalt walk at left side will likely correct seepage issue.*



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***Leakage/potential in  
basement/crawl space -  
attention to:***

- 1. If leaks or seepage exists or occurs in the future, correction is recommended in order below.*
- 1. Ensure adequate eaves trough(gutters), downspouts and proper downspout extensions are in place.*
  - 2. Ensure there is proper drainage of water away from house, including proper soil grading and window wells with adequate drainage.*
  - 3. Have qualified specialist seal/ repair all foundation cracks as required and monitor for movement and/or moisture entry.*
  - 4. Perimeter drainage at footings, includes foundation wrap/ sealing foundation, sump pump/ systems.*

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## Maintenance

At some stage - just about everything on or in your home will need replacement or maintenance. Despite our best efforts with new materials - actually there's no such thing as "maintenance free". This is especially true if you happen to live in a geographic area where there's a significant temperature swing - summer to winter.

**A good rule of thumb is to allow about one per cent of your purchase price, per year for maintenance.**

These notes are intended as a guide to ensure that major items receive adequate attention. They are not a comprehensive list of all maintenance matters for all buildings.

Most people carry out maintenance in the Spring and Fall. In many areas, the summer's too hot and/or the winter's too cold to do anything but the most pressing repairs.

### Exterior

**Grading** - ensure that all grading (which includes patios, drives, walkways and so on) slopes away from the foundation walls and any structural posts or columns, for at least the first five or six feet. All grading must be at least six inches below any brick or stone veneer and at least eight inches below any siding.

**Window wells** - remove debris and foliage. Ensure that the stone in the bottom is at least six to eight inches below the window sill. See the diagram in the exterior section for full details.

**Eavestroughs and downspouts** - must discharge at least six feet from foundation walls or any other structural elements. Clean out gutters and repair any winter damage.

**Bricks/stone/siding/stucco** - repair any damage. Paint and caulk. Repair or replace any damaged areas especially where underlying sheathing or framing is exposed.

**Windows** - paint and caulk as required. Replace any rotted sections. Pay particular attention to the miter joints of clad windows.

**Doors** - paint and caulk as required. Seal the panels of wood garage doors, inside and out. Check automatic door openers run smoothly and that the safety auto reverse sensor(s) work. Lubricate all door tracks, wheels and hinges. Repairing garage door springs is a job for an expert. The long, coiled, horizontal springs are under significant tension and may seriously injure you if they let go unexpectedly.

Check all patio doors and screens for smooth operation and adjust where necessary.

**Roof** - check shingles are secure and that none are missing or damaged. Check flat roofs for adequate gravel cover, blisters or exposed tar. Check all roof flashings are secure and well sealed.

**Chimneys and flue pipes** - have chimneys professionally cleaned. Check caps and flashings are sealed and secure. Clay liners deteriorate over time, especially in very cold climates - replace any damaged units.

**Trim trees** - away from roofs and outbuildings. Cut back vines so that they are at least three feet from soffits, fascias and chimneys.

**Cracks in foundation walls** - are not all major structural issues, however all will deteriorate and may leak if left unattended. Seal all cracks in foundation walls and monitor the area(s) for moisture entry and/or further movement. Professional repairs for all foundation cracks are highly recommended.

**Driveways, paths and patios** - repair cracks and other damaged concrete or asphalt, re-set any loose patio stones or interlock. Ensure that all driveways (as far as possible) and all paths and patios, slope away from the building walls.

Clean out driveway drains.

**Walkouts** - clean out drains, ensure that any retaining wall weep holes are clear and draining.

**Retaining walls, fences and gates** - repair fences and gates. Paint or re-stain about every three years. Re-set any posts heaved by frost.

Repair retaining walls ensuring they lean away from the void, clean out weep holes and ensure any walls above two feet have safety railings.

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## Interior

**Basements and crawl spaces** - check for signs of water penetration or cracks. Look for mold and mildew in damp areas as well as efflorescence (the white powdery deposit found on walls and floors).

Check especially behind storage areas, wood stacks and areas behind large pieces of furniture.

Cold stores are often poorly ventilated - opening the door into the basement for a few days can help to exchange the air. Open up any available wall vents.

Crawl spaces must be vented - often wall vents are closed for the winter -open them in spring to allow fresh air throughout the enclosed spaces.

**Check operation of all sump pumps** and ensure that the discharge pipes are clear of debris and at least six feet from any foundation walls or other structural elements.

**Electrical panel** - check for water penetration and rust. Ensure fuses are fitted tightly and that any visible aluminum wiring is not corroded.

Check for loose or poorly supported wiring - most commonly found in basements and garages. Secure loose wires with appropriate clips.

**You must employ a qualified electrician for any electrical repairs unless you are certain how to proceed. We recommend qualified electricians be used for all electrical repairs, additions and upgrades.**

**Faucets and shower heads** - replace any washers at leaking taps, clean filters with a liquid descaler to reduce bacteria and ensure good water flow.

Check and replace any defective or cracked bathtub or sink/basin caulking.

Toilets that run continuously need adjustment or new mechanisms.

**Furnaces and boilers, heat pumps and air conditioning units** - must be cleaned and serviced annually. **We strongly recommend annual service/maintenance agreements which cover the cost of most repairs.**

Renew missing insulation on air conditioning pipes and seal all pipes where they pass through the house wall. Clear bushes and other foliage that block air conditioning fins.

In cold climates, cover the top of air conditioning units with plywood to keep snow off the fan blades. The plastic covers available are not recommended as they tend to hold moisture inside, promoting rust.

Check all boiler pumps, radiators, reservoirs and pipes for leaks. Some pumps need regular lubrication.

**Attics and crawl spaces** - inspect these areas for squirrels or other uninvited guests. Check for leakage, mildew or other water damage, especially near flashings, soffits and around chimneys and other roof or wall penetrations.

Rake loose insulation level and ensure that soffit vents are not obstructed.

## Monthly

Check ground and arc fault circuit interrupters at outlets and at the electrical panel.

Clean whirlpool tubs.

Check, clean or replace furnace or heat pump air filters.

Check operation of smoke alarms and carbon monoxide detectors.

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## A Guide to Repairs and Renovation Costs (supply & install (not taxes))

### Roofing, Flashings and Chimneys

Strip and re-roof - asphalt shingles	\$2.50 - \$4.00 per sq..ft.
Strip/replace flat roof covering (torch down)	\$6.00 - \$10.00 per sq..ft.
Repair/replace slates	\$28.00 - \$35.00 each
Install new concrete tiles	\$6.00 - \$7.50 per sq..ft.
but you may have to provide additional structural support at extra cost.	

### Electrical

Upgrade to 100 amps (includes panel)	\$750.00 - \$1,000.00
Upgrade to 200 amps (includes panel)	\$2000.00 and up
Install a breaker panel	\$700.00 and up
Install an axillary panel	\$500.00 and up
Install a 240v outlet (stove or dryer)	\$250.00 to \$350.00
Install regular 110v outlet	\$50.00 - \$75.00
Install a G.F.C.I. outlet	\$75.00 - \$100.00
Upgrade aluminum with copper pigtails	\$650.00 - \$800.00
Re-wire a whole house	\$6,500.00 and up

### Heating

Install gas mid-efficiency furnace	\$2,500.00 and up
Install gas high efficiency furnace	\$3,500.00 and up
Install standard oil furnace (inc. fuel tank)	\$5,500.00 and up
Replace a furnace fan	\$300.00 - \$500.00
Replace oil storage tank	\$1,000.00 and up
Remove old oil tank from basement	\$500.00 and up
Remove buried oil tank	\$3,000.00 and up
Install stainless steel flue liner	\$1,000.00 and up
Install complete forced air system	\$8,000.00 and up
Install heat recovery ventilator	\$1,750.00 - \$2,500.00
Install cedar shakes/shingles	\$6.25 - \$7.50 per sq..ft.
Install new slate roof	\$6.00 - \$7.50 per sq..ft.
New flashings for a standard chimney	\$300.00 - \$400.00
Install saddle or cricket at chimney	\$350.00 - \$450.00
Replace flashings at a standard skylight	\$350.00 - \$400.00
Repair valley flashings	\$20 - \$30 per linear ft.
Rebuild masonry chimney from roof -	up \$150.00 per linear ft.
Ditto - but double flue pipe	\$200.00 per linear ft.
Repaint masonry chimney	\$70.00 per hour
Install concrete cap	\$225.00 - \$400.00
Install metal cap	\$175.00 - \$350.00
Install metal liner (gas or oil)	\$1,000.00 and up
Install stainless steel, insulated flue pipe	
(for a wood stove for example)	\$1,750.00 and up

### Exterior

Install aluminum seamless eavestrough	\$2.50 - \$4.00 linear ft.
Install aluminum/vinyl siding	\$3.75 - \$6.00 per sq..ft.
Install cedar siding	\$5.00 - \$7.50 per sq..ft.
Install stucco	\$7.00 - \$12.50 per sq..ft.
Install bricks	\$14.00 and up per sq..ft.
Install stone	\$25.00 and up per sq..ft.
Install parging	\$5.00 - \$6.50 per sq..ft.
Install a cedar deck	\$30.00 and up per sq..ft.
Install a preserved wood deck	\$17.50 and up per sq..ft.
Re-surface asphalt driveway	\$3.00 - \$5.00 per sq..ft.
Install interlock bricks	\$8.00 - \$10.00 per sq..ft.
Install a drain at the bottom of a sloped driveway	\$1,000 and up

### Structure

Underpin or add foundations	\$350.00 - \$500.00 lin.ft. min. \$3,500.00 and up
Replace sill beam	\$75.00 and up per lin.ft.
Replace main basement steel beam	\$1,000 - \$1,500
Install steel tele-post with footing	\$350.00 - \$500.00
Termite inspection	\$250.00 and up
Seal vertical crack in concrete foundation	\$600.00 and up
Ditto - but from exterior (excavation)	\$800.00 and up
Underpin footings	\$350.00 and up per lin.ft.
Build an addition (2 storey)	\$150.00 - \$250.00 sq..ft.
Build a single garage (siding)	\$12,000.00 and up
Build a double garage (siding)	\$20,000.00 and up
Fill in a swimming pool	\$5,000.00 and up
Ground source heat pump (includes second well	
(for discharge)	\$12,500.00 - \$15,000.00
Air source heat pump	\$3,500.00 - \$5,000.00
Air conditioning on existing ductwork	\$2,500.00 - \$3,500.00
Replace A/C compressor	\$900.00 and up

Annual furnace service (includes maintenance agreement) \$200.00 - \$250.00

### Insulation

Insulate attic to R.32	\$1.75 - \$2.50 sq..ft.
Insulate walls (blown in)	\$3.25 - \$4.50 sq..ft.
Insulate walls from exterior (prior to new siding)	\$2.00 - \$3.50 sq..ft.
Insulate framed basement walls	\$2.00 and up sq..ft.
Install 'Max' attic vents	\$150.00 each
Install rotary attic vent	\$100.00 and up each

### Note:

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## A Guide to Repairs and Renovation Costs (supply & install (not taxes))

### Plumbing

Replace main water shut off valve	\$175.00 and up
Replace toilet seal	\$150.00 - \$200.00
Replace electric water heater	\$450.00 and up
Replace mid efficiency gas water heater	\$1,200.00 and up
Install new septic system	\$7,000.00 - \$9,000.00
Dig up and replace failed septic system	\$12,000.00 and up
Pump out septic tank	\$400.00 - \$600.00
Replace service pipes in street	\$200.00 and up per lin.ft.
Replace galvanized pipes with copper:	
Bungalow - one bathroom	\$1,750.00 and up
Bungalow - two bathrooms	\$2,500.00 and up
Two storey - two bathrooms	\$3,000.00 and up
Install bathroom fan	\$175.00 - \$250.00
Replace leaking shower pan	\$1,000.00 and up
Replace bathtub enclosure (ceramics)	\$1,500.00 and up
Install solid waste tank and pump for basement, bathroom or laundry	\$1,500.00 and up
Drill a well	\$30.00 - \$40.00 per foot
Install submersible water pump in well and pressure tank in house	\$1,750.00 - \$2,500.00
Replace a submersible sump pump	\$250.00 and up
Replace a laundry tub	\$150.00 - \$200.00
Remodel a bathroom	\$5,500.00 and up
Install a basement bathroom	\$3,500.00 and up
Install a water softener	\$1,500.00 - \$2,000.00

### Interior

Install drywall over plaster	\$2.25 - \$3.50 sq..ft
Remove old plaster and install new drywall	\$3.75 - \$5.00 sq..ft
- but bear in mind, you'll almost always want to improve the insulation and add a vapour barrier at the same time - thereby increasing your costs.	
Spray stipple ceiling	\$4.00 - \$5.00 sq..ft.
Install suspended ceiling	\$4.00 - \$5.50 sq..ft.
Install hardwood floor	\$8.50 and up sq..ft.
Install good quality laminate floor	\$6.50 and up sq..ft.
Sand and re-stain hardwood	\$2.75 - \$4.00 sq..ft.
Install parquet floor	\$5.00 - \$7.00 sq..ft.
Install ceramic floors (inc. sub floor)	\$8.00 and up sq..ft.
Install sheet vinyl (inc. sub floor)	\$6.50 and up sq..ft.
Install gas fireplace	\$2,500.00 and up
Install wood stove (inc. flue pipe)	\$3,750.00 and up
Sweep a chimney	\$75.00 - \$100.00
Install central vacuum system	\$800.00 and up
Install a man door closer	\$150.00 - \$200.00
Install automatic garage door opener	\$350.00 and up

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