SAFE HOMES CANADA HOME INSPECTION REPORT

Tarion Inspection – First Year

ADDRESS: xx Mumberson Street, Cookstown, ON

BUYER: xxxx

INSPECTOR: Andrew Christie, CET (civil), RHI

DATE: March 14, 2022

AGE OF HOME: less than one year

Scope of the Report

This inspection is a Tarion Warranty inspection for a new home.

This inspection is a 'one year' Tarion inspection.

This report comprises the findings at three separate inspections carried out in November, 2021, February, 2022 and March, 2022.

It is a visual inspection only. The inspection was carried out on behalf of, and as a service to, the home owner. Any non-visible elements, including buried pipes and any water conditioning and filtering equipment are excluded from the inspection.

Occupant safety – including alarms and means of egress – are completely excluded from the inspection. Safety notes are provided as a courtesy.

To provide a frame of reference, the 'front' of the home is the side facing Mumberson.

Summary of Key Issues/Deficiencies/Work Required:

***Note that deficiency photos are in various element sections below.**

**See the Foundation, Roofing, Floor Structure, Plumbing, Interior Finishes, Outside Structures and Walls sections.

Wall Assemblies, including The Brick System:

Plenty of work is required at the building envelope. Gaps, imperfections and openings are observable at many – something approaching 100 – locations at the brick masonry system. A masonry restoration expert will be required to match the colour of the brick mortar when correcting these obvious deficiencies.

Insulation:

Work is required at attic insulation. (Update: see the Insulation section, within the Roofing section, for an update. The builder has added significant insulation, but deficiencies remain.)

The Shingles:

Work is required at a number of locations at the roof and adjacent elements; see the Roofing section. **(Be sure to ask the builder whether photos were taken of improvements to the low venting when insulation was added recently.)**

Interior Finishes:

The home owner has identified a number of important deficiencies. See the Interior Finishes section.

Floor Structure:

Important work is required at the basement stair stringers.

The gas fireplace:

The gas fireplace is functional.

However, the homeowner stated that the drywall above the front of the fireplace becomes excessively hot, to the point that the homeowner is concerned about possible combustion due to pyrolysis. Pyrolysis is the gradual degradation of materials due to heat over time, whereby the material becomes more and more flammable. Further investigation, expert opinions and discussion will be necessary here.

FOUNDATIONS

Access:

The foundation walls are fully observable outside.

In the basement, the foundation is not observable due to finishes.

Type of Foundation:

Poured concrete

Stability/Condition:

The poured concrete foundation walls are completely stable, as observable.

Water Infiltration:

There is no evidence of water entry at the foundation level here. The basement is systemically dry.

A very sensitive, reliable moisture meter was used throughout the basement here.

Work to Prevent Water Entry:

Buyers and all homeowners should know that it is normally possible to prevent and stop water infiltration by transporting eaves trough-captured water (and sump water) well away from the home, on top of the ground, and by sealing all possible/obvious entry points for water.

If it is felt that water is infiltrating through a crack in a poured concrete wall, the most practical, cost-effective way to seal a crack is to **inject poly urethane at the inside face.** It is rarely necessary/practical to dig down outside at poured concrete walls.

The bottom piece of the front right eaves trough down pipe requires formal fastening.

The splash pad at that (front right) down pipe is sloping down toward the home.

Settlement/Stress Cracks:

A few normal settlement/stress cracks are observable.

The crack at the front part of the right wall is quite decisive, and open. A high quality sealant compound – such as hydraulic cement – should be applied at the front right crack above the waterproofing membrane, at the outside face.

Deficiencies and Other Work:

A cracked area of concrete requires repair at a left basement window.

Debris is observable – and creates a gap – between the waterproofing membrane and the outside face of the foundation walls. The debris should be removed, as possible, and the top edge of the membrane should be formally fastened. (Note: for reasons unknown, sealing the top edge of membrane systems outside foundation walls is not required as per specifications.)

The membrane system has not been formally trimmed at basement windows. Such systems are normally trimmed formally below the window sills.

Informal parging material prevents formal caulking at the joints where the basement windows meet the foundation walls. All basement window joints must be fully and formally caulked.

The crack in the rear door sill should be formally cut and sealed, or sealed in a visually acceptable fashion.

The mortar joint within the rear door sill should have been formally caulked.

Patching and finish work is required at damage at the front left corner.

Some kind of major stain requires removal at the rear wall.

Some fastening is required at the down pipes, and the front right splash guard is sloping in the wrong direction.

Sump Systems:

The sump pump could not be tested because the lid has been bolted into place, and the normally-provided two-piece plug is not in place. The builder should be invited to provide a two-piece test plug.

Maintenance:

Eaves troughs require periodic re-fastening, re-caulking and cleaning.

Again, be sure to fully seal/maintain all joints at door sills, basement windows and at all mechanical penetrations/covers.

ROOFING AND THE ATTIC

Access:

All areas of the roof were fully observable.

A ladder was moved to approximately 10 locations around the perimeter of the roof to facilitate observation/assessment.

Binoculars were used to examine the higher parts of the roof.

Type of Roofing System:

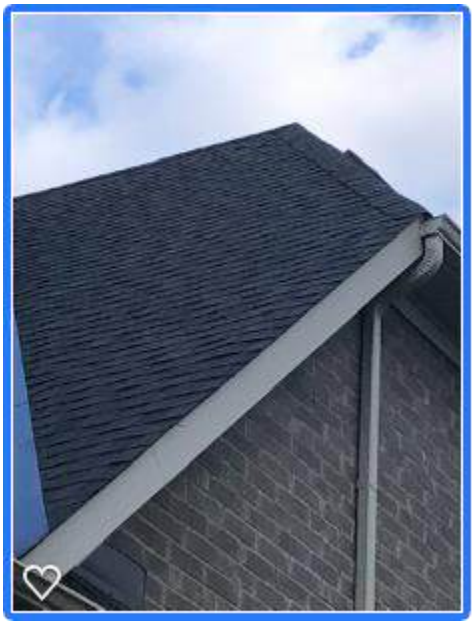
Asphalt shingles

Condition/Age:

The shingles are less than a year old.

They were well-nailed overall. See Deficiencies below.

Re-shingling will not likely be necessary for about 20 years, best estimate.

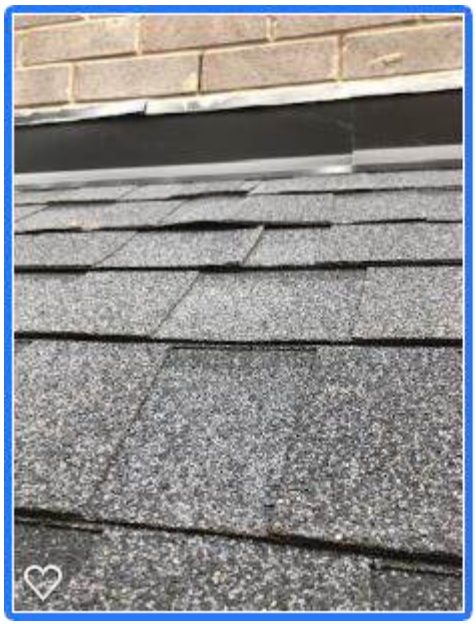


Deficiencies:

Half a dozen or so nails were not fully sunk at the shingles.

The roofer should be invited to fully sink all nails to help prevent shingles from blowing off the roof.


HDR




HDR


HDR

All exposed nail heads must be fully caulked.

Formal cleanup is required at the metal junction flashings.

The metal valley flashings must extend all the way to the bottoms of valleys or shingles at the bottom of the flashing will degrade far prematurely.

The roofing is incomplete at the end of one of the lower strip sections, at the bottom of a diagonal metal piece.

The metal junction flashing is incomplete and not sealed. There is a space between the angled part of the flashing and the horizontal part of the flashing. A formal, continuous and fully-sealed flashing must be provided by the builder. Also, two of the shingles are not fully seated at the left side low roof, as shown in the photo.

One shingle is ripped at the bottom of the rear slope.

Water is currently infiltrating through a central vacuum pipe near the garage stair. That pipe is directly below the location where the rear end of the down pipe is dumping water at the back right corner of the dormer. The builder's forces should be invited to determine exactly where the water is infiltrating, and correct/seal the deficiency.

Possible water entry is a concern at the right side of the front dormer, as evidenced by the water dripping through the pipe at the ceiling, just inside the right entry to the garage.

Attics:

Access:

The attics are fully accessible (with some difficulty). It was walked and crouched through.

Roof Structure:

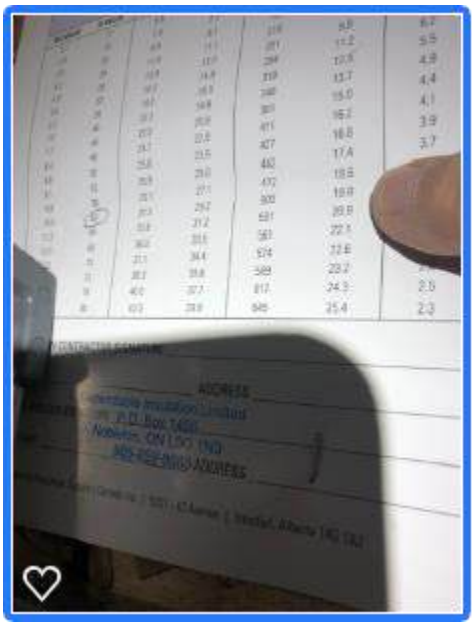
Plywood sheathing bears upon a truss assembly.

There is no significant darkening or damage at the sheathing.

Insulation: (First Visit Notes)

The insulation here is loose blowing wool and glass fibre batts.

The current building code requirement is R60. The depth to provide that R value is approximately 20 inches.



Insulation is significantly lacking at much of the attic; that includes at the loose insulation and the batts that have been installed over cathedral assemblies.

Insulation (Second Visit - After Insulation was Added by Builder)

The insulation was re-examined and re-measured from the access points, and by carefully moving a short distance into each of the attics.

A significant amount of insulation appears to have been added since the first inspection.

It appears to be the required 20 inches deep, or close to that depth, at most areas.

However, the insulation is a few inches low just rear of the access point in the rear attic; it should be topped up there.

Further, there appear to be low spots above the middle part of the front second floor bedroom. Those low spots are observable from the access to the high attic. And, the thought that the spots might be low were confirmed by thermal camera readings in the middle of the bedroom. The lowest ceiling reading of 19.5 degrees C was found at the middle of the right part of the front bedroom. The builder should be invited back to the home to address this deficiency.

A reading of 18.6 was taken at the right wall that separates Fatima‘s bedroom from the attic space above the front door and living room area.

So the coldest part of the room is the wall in between the front right attic and the bedroom and the second coldest part of the room is the floor in the bedroom.

The warmest part of the room is the ceiling, which means insulation is lacking above the garage and at the wall in between the bedroom and the attic.

The following photo shows that insulation has been added above the cathedral assemblies.

Ventilation:

Attic ventilation includes surface and soffit vents.

Ventilation is lacking at the soffit level. The builder should be invited to add soffit baffles so the ventilation complies with the building code requirement.

WALL SYSTEMS

Access:

All wall sections were fully observable.

Type of System:

Brick masonry.

Condition of Walls:

The brick masonry is stable, but extensive repairs are required at the mortar system.

Settlement/Stress Cracking and Other Damage:

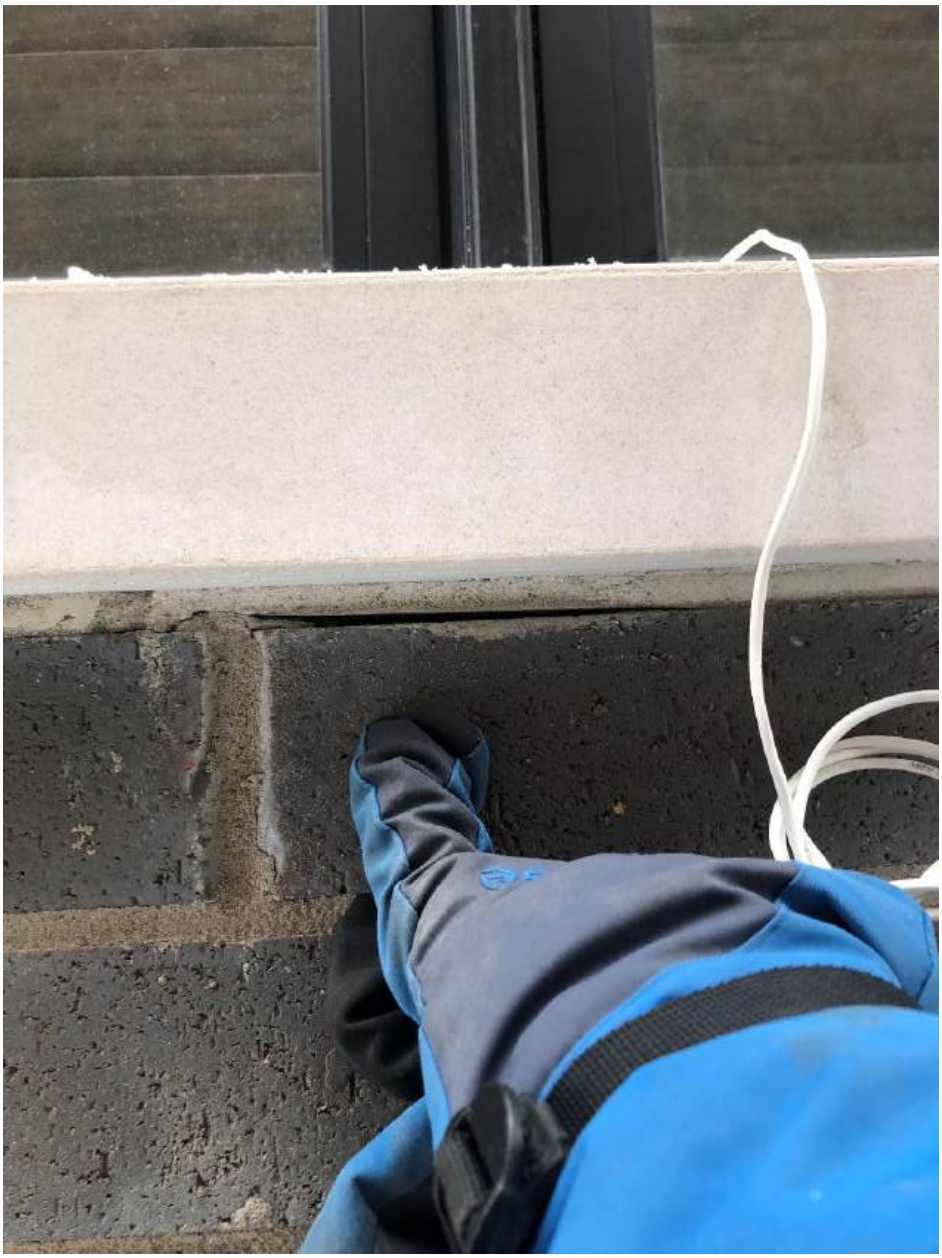
There are no significant settlement/stress cracks at the brick masonry system. One or two possible, very minor cracks are observable.

Work Required:

Gaps, imperfections and openings are observable at many – something approaching 100 – locations at the brick masonry system. A masonry restoration expert will be required to match the colour of the brick mortar when correcting these obvious deficiencies.

Some cleaning is required at the brick system, including outside the front and rear doors.

Sealant work is required under one of the window sills.



A repair is required where the brick system meets the gable soffit assembly.

All horizontally-aligned mortar joints within window and door sills must be caulked.

Open joints at the decorative mouldings should be waterproof or they should be caulked.

Maintenance:

Be sure to maintain all caulking at joints around windows, and at the entire building envelope.

FLOOR STRUCTURE

Access:

Most of the floor assembly is not observable, due to interior finishes, which is normal.

Condition/Stability:

The floors are sound and stable underfoot.

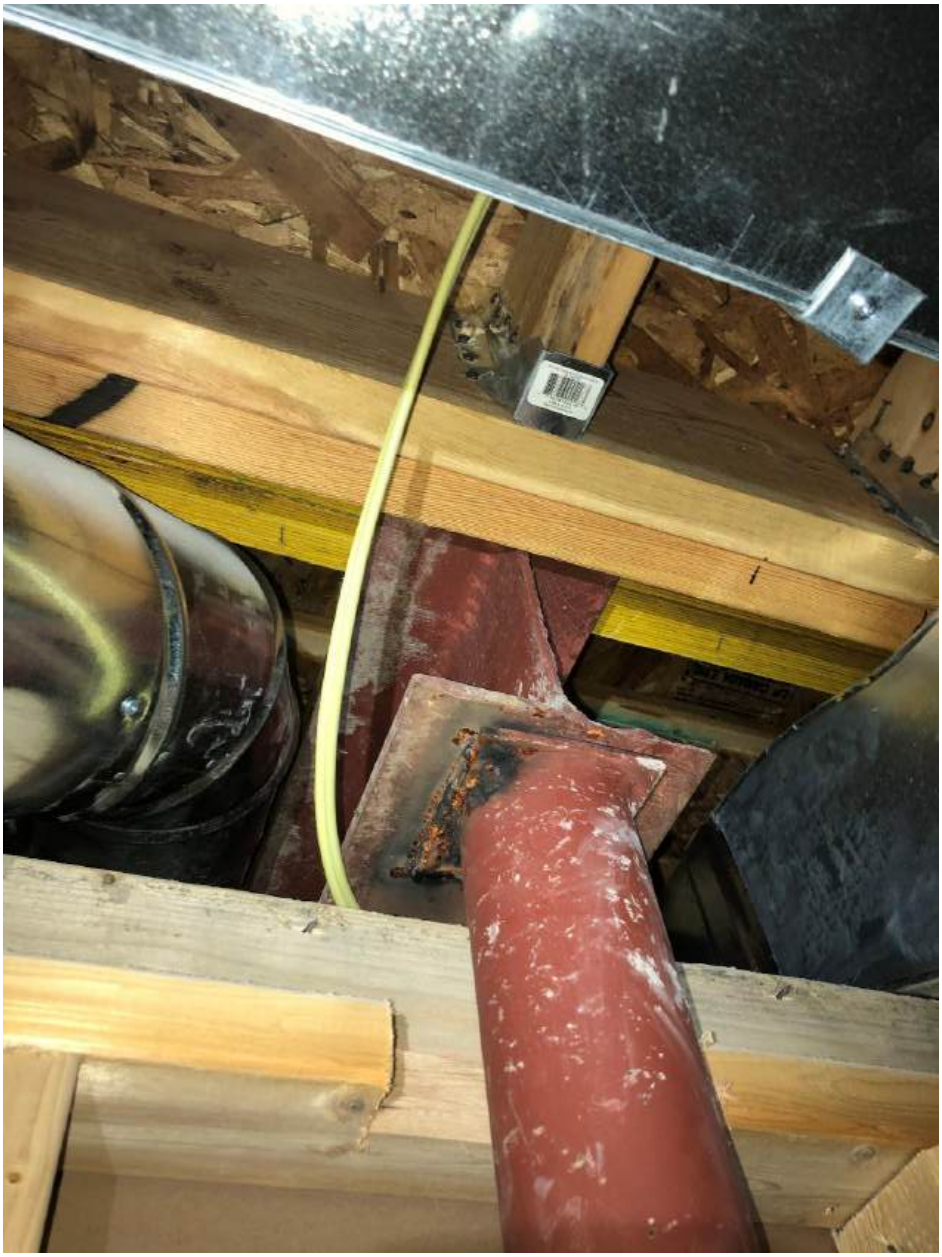
There is no evidence of significant deflection.

Type of Floor Assembly:

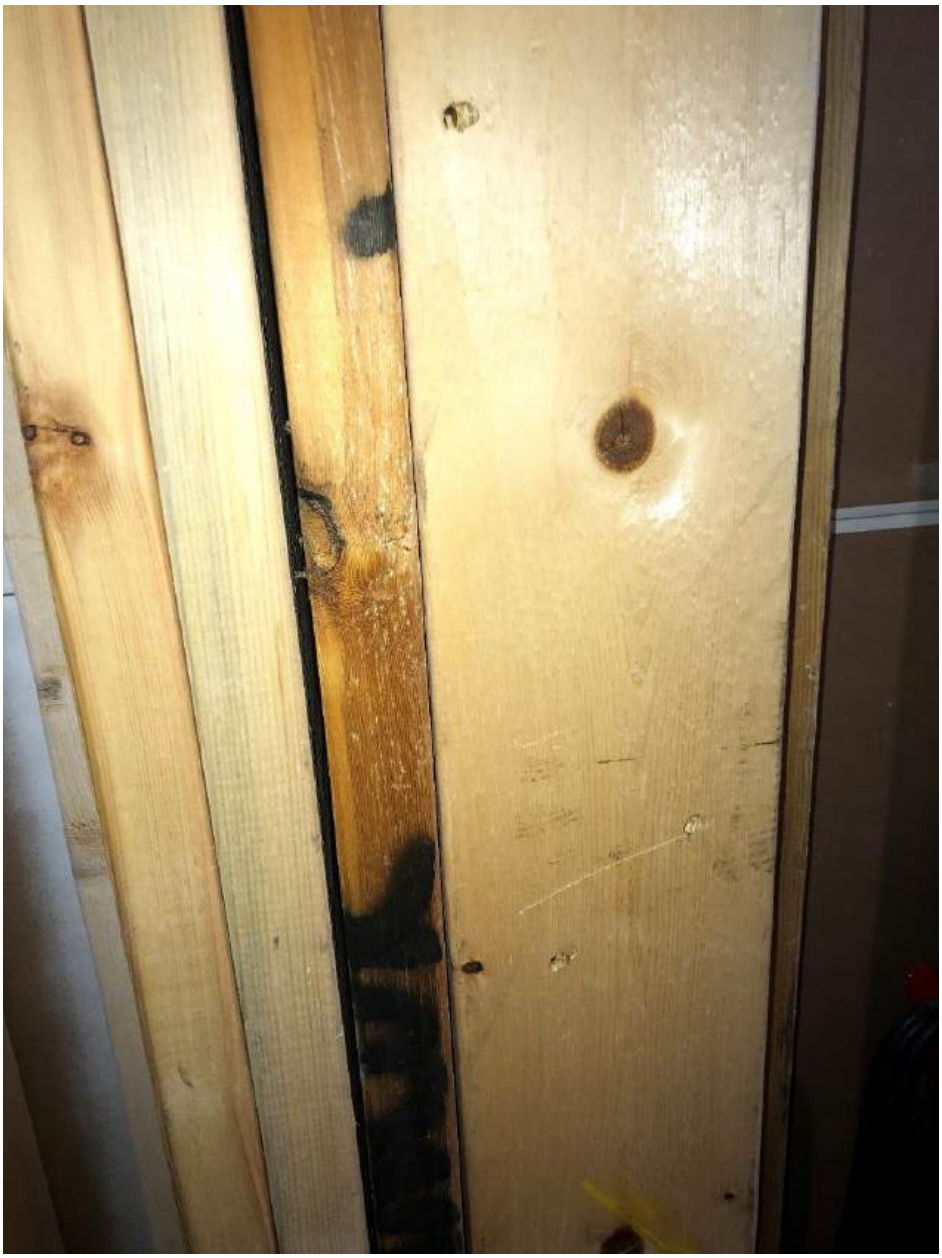
Waferboard sheathing bears upon lumber and engineered joists.

The joists bear upon the foundation walls and structural steel beams.

The beams bear upon steel posts.



Some built-up wood posts are also in use. The minor gaps between post members are not a concern.



Moisture Decay:

There is no evidence of moisture decay at floor members.

A few of the wood members were prodded.

Deficiencies at the Floor Assembly:

Significant gaps are observable between the basement stair stringers and the members that support them for stability. Further, those added support members are informal. Vertical posts are recommended under the middle parts of the stringers.

WINDOWS

Type of Windows:

All windows are thermal units.

Thermal Seals:

None of the thermal seals have failed.

Mechanical Function:

The windows are mechanically functional.

However, the window in the back right basement bedroom is bowed, and the vinyl track at the sill is not fully connected to the framing below. The bow in the window track has not affected function or thermal resistance significantly, but it should be noted as a deficiency.

Maintenance:

See the Wall section.

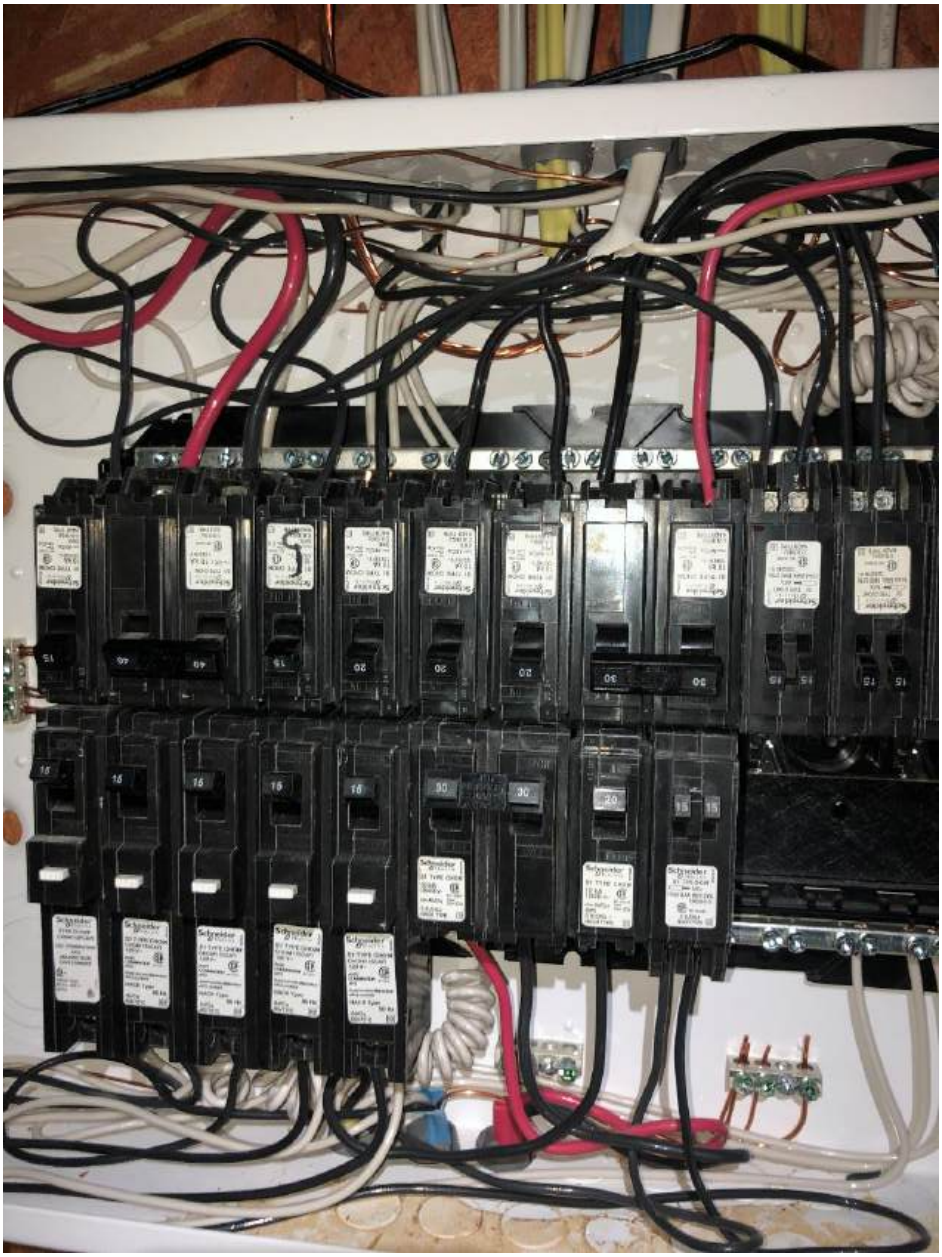
ELECTRICAL

Total Power:

The total power service is 200 amps, which is adequate for this home, notwithstanding unusual occupant requirements.

The distribution panel is at the front wall in the basement mechanical room.

None of the contactors have been doubled, and there are no obvious hot spots.



Type of Distribution/Protection:

A breaker panel is in place.

Type of wiring:

Copper

Electrical circuit details:

All receptacles are grounded.

Ground Fault Circuit Interrupter Protection:

GFCI (ground fault circuit interrupter) protection is in place for the exterior power or beside sinks.

Note that the powder room receptacle is protected by the GFCI in the left main floor bathroom.

Other Deficiencies:

None.

HEATING/COOLING

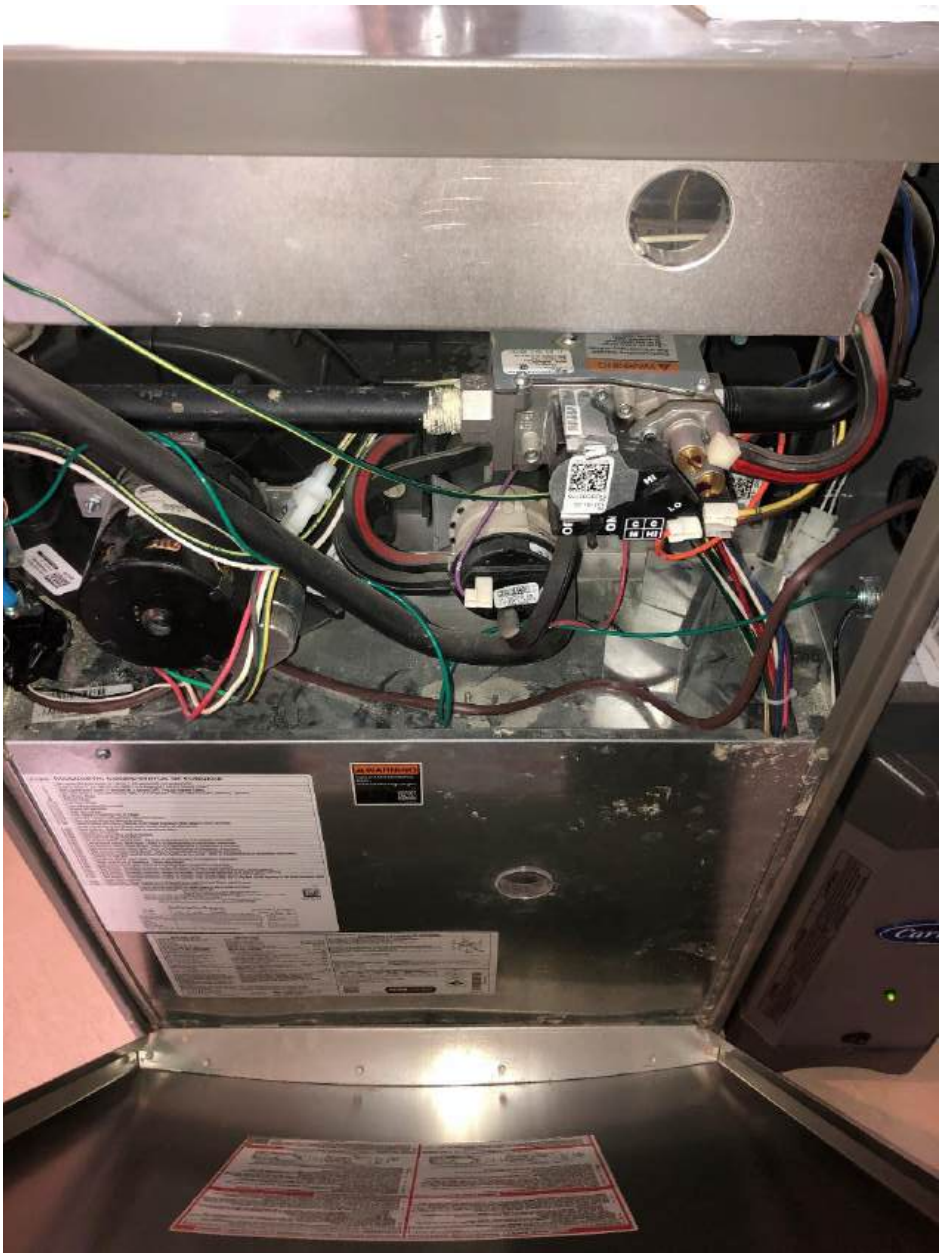
The home is heated by a newer gas-fired furnace, which is providing heat throughout.

There is no air supply in the main floor powder room or the back left basement closet, which is not a concern.

The furnace is obviously brand new.

The furnace is running well.

There is no evidence of significant corrosion inside the furnace.



The furnace is vented through a modern PVC pipe.

Air Conditioning:

The air conditioner was not tested due to low outside temperature. (The physics of air conditioners is such that they will not function (provide cooling) once the outside temperature drops to about 12 degrees C, or lower.)

Fireplaces:

The gas fireplace is functional.

However, the homeowner stated emphatically that the drywall above the front of the fireplace becomes excessively hot, to the point that the homeowner is concerned about possible combustion due to pyrolysis. Pyrolysis is the gradual degradation of materials due to heat over time, whereby the material becomes more and more flammable. Further investigation, expert opinions and discussion will be necessary here.

What Every Buyer Should Know About Forced Air Gas Furnaces:

It is normally possible to repair this kind of furnace when it fails. If a contractor states that a furnace requires replacement, be sure to ask exactly why.

If a contractor states that a heat exchanger is cracked, the buyer has a right to ask to see the image of the cracked heat exchanger. If it is cracked, ask if it can be replaced.

PLUMBING

Water Supply:

The water supply is municipal.

Sanitary Disposal:

The sanitary disposal system is town sewers.

Main Shutoff:

The main shutoff valve is at front wall in the basement mechanical room. It is functional.

Be sure to turn off the valve at the pressure relief tank in an emergency as well as the main valve.

Plumbing Fixtures:

The fixtures are functional.

The main shower control handle in the ensuite bathroom is loose, which may promote failure.

Drains and Sewage Ejectors:

Drains are ABS plastic.

Supply Pipes:

Supply pipes are mostly Pex plastic with some copper.

The Pex is Pure Link, which is a good quality type of Pex.

Work Required:

See above.

Water Conditioning/Filtering/Treatment:

These elements are excluded from the inspection.

Hot Water Tank:

The hot water tank is vented through a white PVC exhaust, which is contemporary.

Exclusions:

The plumbing vent system, hot water tank and hose bibs are excluded from the inspection.

INTERIOR FINISHES

Imperfections are observable at various locations.

Be sure to maintain a full seal at the key joints in the bathrooms.

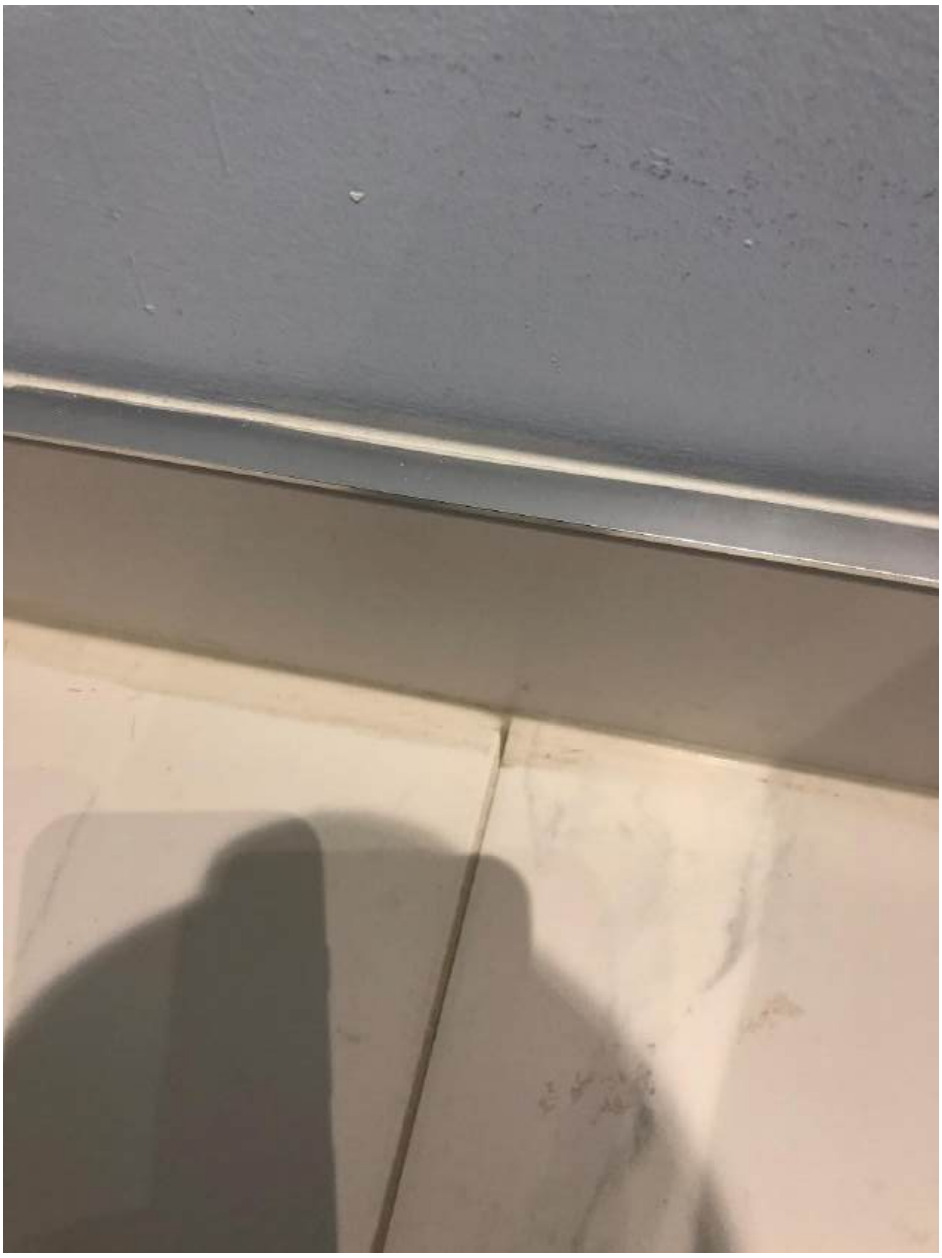
Caulking is incomplete at fixture junctions and escutcheon plates.

Interior finishes are – for the most part – excluded from the inspection.

Drywall imperfections are observable at various locations.

Final caulking is incomplete at the open joints at the junctions where the windows meet interior finishes.

The kickplates in the main floor powder room and under the kitchen sink are loose.



The floor tiles in the main floor powder room are mis-aligned with reference to the home's design; they should be perpendicular to the as-built configuration.

Grout imperfections were observed at the floor times in the breakfast nook and at one of the showers.

A spot of excess grout requires cleaning there also.

Some caulking at the wall/floor junction in the laundry room was applied by a ‘dirty finger’.

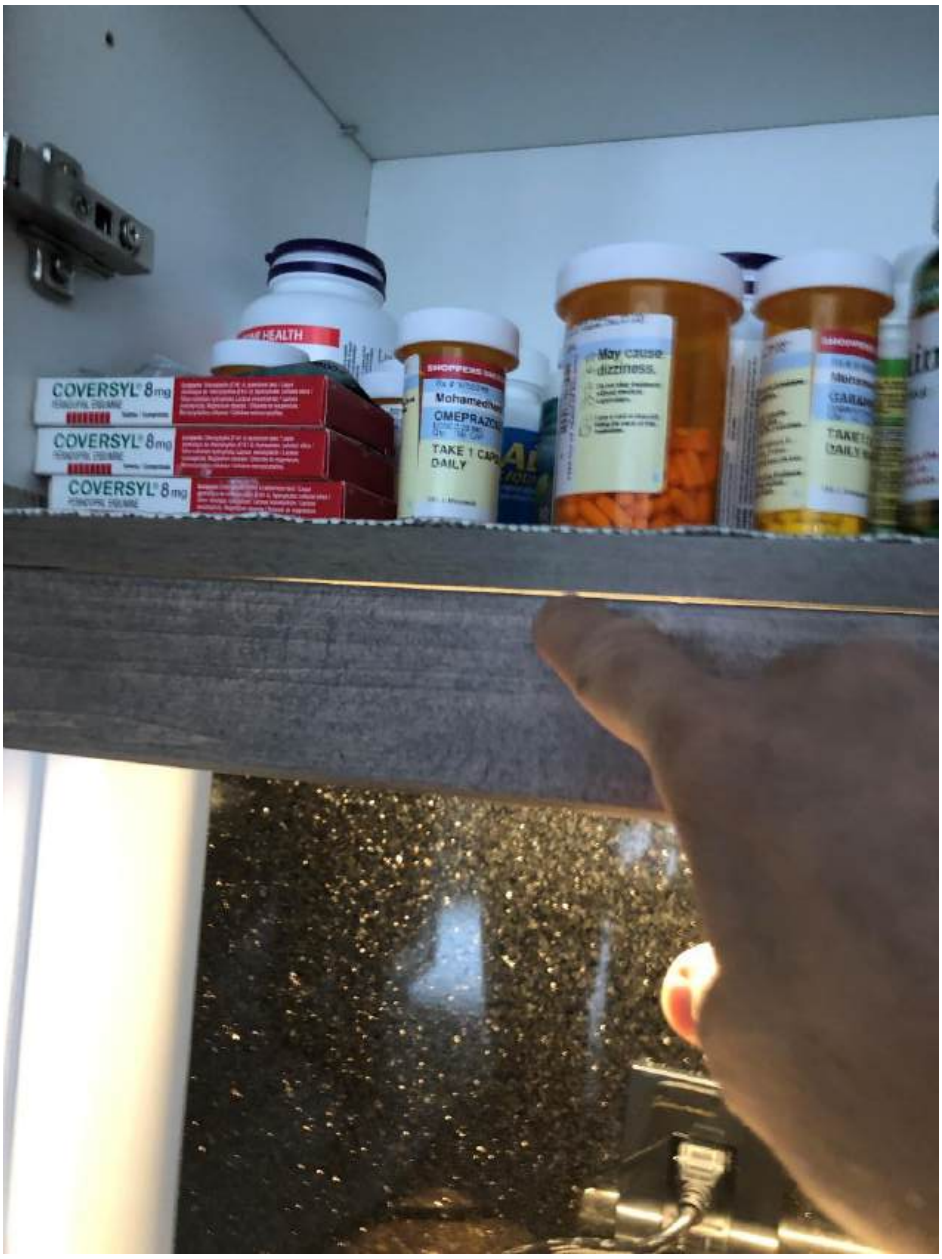
A bump in the drywall is observable at the rear end of the left wall in the master bedroom.

Work is required at corner beads. (See photo below.)

Sealant should be added where mirrors meet countertops.

Kitchen Cabinets:

Significant gaps are observable at horizontal joints at the bottom of cabinets; they are unsightly. Perhaps the visible light can be eliminated by caulking from the insides of the cabinets (underneath).



Adjacent doors do not line up in elevation at the right side of the pantry and to the rear of the stove.

A gap is observable inside the kitchen drawers where the face piece meets the bottom section.

WATER CONTROL AND SITE DRAINAGE

Expect cleanout, re-caulking and re-spiking over the years at the eaves trough system.

See the Foundation section.

HOUSEHOLD APPLIANCES

The appliances were not tested.

The garage door opener is functional.

HOME AND CHILD SAFETY

Occupant safety is completely excluded from this inspection.

Safety notes are provided as a courtesy.

***See the Heating section regarding heat transfer from the fireplace into the adjacent elements, including drywall.**

OUTSIDE STRUCTURES

Fences and sheds were not inspected.

The concrete surface inside the garage has not been formally finished.

Some patching is required at the front exterior stairs.

FUNGI, WILDLIFE AND INSECTS

There is no evidence of significant mould production or insect/wildlife activity.

Exhaust Fans:

The bathroom and kitchen exhaust fans are functional.

Andrew Christie, CET (civil eng.), RHI