

40 Arcadian Circle, Toronto

Inspection Report

January 20, 2016



COMPANY INFORMATION

- Professional Engineer (**P**rofessional **E**ngineers of **O**ntario)
- B.A.Sc. - Civil Engineering (University of Toronto)
- 30 years Inspection Experience
(14+ years with **Carson, Dunlop & Associates**)
- Over 12,000 Homes Inspected

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Overall Condition:

This is a solidly constructed early 1900's home that has had a number of updates and is considered to be in better than average condition compared to similar homes in the area.

Roofing, Flashings and Chimneys:

The roof is surfaced with asphalt shingles. The shingles on the south-facing slope of the roof are newer (7 years old) premium-grade shingles that are in good condition. The north-facing shingles are previous generation and they are near the end of their life. They are starting to curl and lose granular material - particularly at the flare at the bottom of the roof and where water from the dormer/turret eavestroughing runs over the roof shingles before ultimately ending up in the lower front trough. This older, north section of roof and the southwest extension will need to be stripped and resingled within the next 2 or 3 years. Special attention will need to be paid (at that time) to the turret area as this is a common vulnerable spot for ice damming. Be sure that an ice-and-water shield membrane is installed under the shingles in the area of the turret where it intersects the sloped roof above.

The garage roof shingles are worn on the west slope in particular. There are some shingle layers below so there may be a few more years before it leaks. In any event, it is a garage, so it is conceivable to wait for leakage before stripping and resingling. Resecure the loose west side garage eavestroughing.

Monitor the small east and west oriel window roofs as they are rusty. It is understood that loose perimeter trim on the east oriel window will be replaced in the near future.

The masonry chimneys are in satisfactory to good condition.

Inspection Methods and Limitations:

-Roof inspected with binoculars. Visibility was limited by snow in a few areas.

Exterior:

The exterior brickwork is in generally good condition. Some localized repointing would be desirable (e.g. east side) on a maintenance-related basis. The patched brick on the south wall is somewhat non-standard, but appears to be serviceable.

The aluminum eavestroughs and downspouts are in good overall condition. The northwest downspout is loose and needs some modification to drain better. Specifically, the takeoff elbow needs to be moved up so that the extension will have a more positive drain slope to the front yard.

The rear deck is about 4 years old and is in good condition. There are no markings either way to verify whether the rear deck railing glass is tempered or not.

The front porch roof is not level. It is suspected that the former columns settled at some point and were subsequently replaced. No remedial action is considered necessary.

The garage is a typical wood frame structure for the area and age of the house (i.e. not high quality but should prove to be serviceable for now). The interior walls have been reinforced with waferboard and the roof rafters have also been reinforced. The base of the walls is at grade level and prone to rotting - monitor.

Minor Deficiencies:

- The railing around the front porch is short by current standards and the space between spindles is larger than permitted by current standards. Fortunately, the Building Code is not retroactive, but it will have to be improved and made taller if it is ever altered or replaced.
- Extend downspouts from the front dormer/turret eavestroughing down over the roof into the lower north eavestrough to reduce water-related erosion of the asphalt shingles.

Inspection Methods and Limitations:

- Exterior inspection from ground level.
- Visibility is restricted below the rear deck.
- There is no access below the front porch for inspection.
- Snow on the rear deck surface restricted the inspection of this area.

Structure:

The stone foundations support solid masonry exterior walls on the main part of the house. Despite typical floor sag in some areas, the house appears to be in good structural condition for its age.

Inspection Methods and Limitations:

- The attic was inspected from the attic access hatch.
- 90% of the interior foundation wall was obscured by interior finishes.
- Walls were spotchecked only.

Electrical:

The house has a 100-amp service with a circuit breaker panel. The service size is considered to be appropriate and typical for a single family home.

While most of the house has been rewired, we did note some of the original knob-and-tube wiring was still in use particularly lighting in the front rooms and stairwell of the house and likely some 2nd floor outlets at the front of the house.

Knob-and-tube wiring is very common in the area (and is still present in many homes across the City that are more than 65 years old). It is even still permitted under the current Electrical Code and is considered to be a safe method of wiring by the Electrical Safety Authority:

http://www.esasafe.com/pdf/Flash_Notices/09-09-FL.pdf

Nonetheless, for reasons more political than scientific, many insurance providers won't insure houses with knob and tube wiring and you may have to switch insurance companies, we advise you check with your provider. We would also suggest contacting Dave Slack at David Slack Insurance Brokers (1-800-971-1363 or 416-992-6695) as they will typically insure homes with knob-and-tube wiring provided that they have been inspected by us and the wiring is found to be in good condition (as is the case here). A few other insurance companies will also insure knob-and-tube wiring.

Realistically though, this type of wiring is not going to become popular again and our best recommendation would be to replace any remaining sections. A very ballpark figure for replacement would be \$4,000 to \$6,000, but depends on what the electrician finds after a detailed and specific analysis of exactly where remaining knob-and-tube circuits are hidden. Consult several electricians for actual quotations.

A few seemingly 3-prong outlets are not actually grounded - this will be corrected automatically when the wiring is upgraded. The front bedrooms and sunroom have limited electrical outlets - add more when upgrading the wiring.

Minor Deficiencies:

- Cover the gap in the electrical panel cover to prevent inadvertent access to the energized interior.
- Circuits are not adequately identified on the electrical panel cover. Labelling needs to be updated.
- Resecure the loose northwest exterior electrical mast.
- Wiring to the front exterior electrical outlet is potentially exposed to mechanical damage and is supposed to be protected in conduit.

Inspection Methods and Limitations:

- Concealed electrical components cannot be inspected.
- The main disconnect switch was not operated and its cover was not removed.

Heating:

The house has a hot water heating system in which a <2-year-old tankless water heater (170,000 BTU/hr max.) provides warm water for the radiators (as well as domestic hot water for sinks and baths, etc.). This is a good quality system. The system was tested and was found to heat up the radiators quite quickly. As is typical with tankless water heaters, it can take a little while for hot water to arrive at a fixture once it is turned on. Typical life expectancies for tankless heating units have not yet been established as the technology is newer, but roughly 20 years total is anticipated.

The 2nd floor bathroom has electric radiant floor heat that was found to be operable.

The basement has very few radiators and was noticeably cooler than the other floors during the inspection. The basement has not been renovated in some time. If improvements are planned, they should include installing additional radiators.

The kitchen and main floor powder room do not have formal heat sources, but will likely be OK without.

Inspection Methods and Limitations:

- The heat exchanger is not visible.
- Safety devices not tested.
- Heat gain/heat loss calculations are not done.
- Radiator valves not operated. Try not to operate them if at all possible as this can cause valve stem leakage. Some radiator handles are missing, in fact.
- Although we have no reason to suspect that one is present, it should be noted that checking the premises for buried oil tanks is not included in the inspection or the Standards of Practice.

Air Conditioning:

Cooling is provided by two ductless (split-type) A/C systems. One services the kitchen eating area and is rated at 11,500 BTU/hr and the other is located in the main stairwell - it has a rating of 24,000 BTU/hr. The later unit was installed 6 to 7 years ago. The kitchen unit was reportedly installed at the same time, but its serial number suggests that it was manufactured in 2001. In any event, air conditioners have a total typical life expectancy of about 15 years (statistically). At the time of the inspection, it was too cold outside to test the air conditioning (running the A/C when the temperature is below 16°C can damage the compressor).

Insulation:

Fibreglass and cellulose insulation with an R-value of roughly 30 was noted in the attic. The insulation is somewhat uneven (likely from workers in the attic). Ideally this would be upgraded to R-50 (for about \$1,500 to \$2,000), but this should only be done *after* all of the electrical work has been completed. Also, it should be anticipated that it will take a long time to offset the capital cost of improvement via actual energy savings. The attic access hatch should be insulated and weatherstripped.

The original solid masonry walls were built without insulation and with no space to add more insulation. This is typical for the era. Since adding more insulation is not easily done, it is best to concentrate on reducing air infiltration through caulking/sealing and weatherstripping as much as possible. For instance, seal around the front furnace exhaust flue and front gas inlet pipe in the basement.

It would appear that most of the basement was finished many years ago. As such, there seems to be little or no insulation behind the panelling. If the basement area ever gets renovated, more insulation (up to R-12) should be added then.

The southwest main floor sunroom is cool in winter as it has no radiator combined with unheated floor, ceiling and walls. This is more of a 3-seasons space.

Inspection Methods and Limitations:

- The attic was inspected from the attic access hatch.
- Continuity of air/vapour barrier not verified.
- Although checking for asbestos (which may be present in many products and materials) is not included in the inspection or the Standards of Practice, it is quite likely that the radiator pipe wrapping located behind ceiling surfaces in the basement has an asbestos component. This is very common in older houses. This old pipe insulation is not considered to be a hazard in the home (if left undisturbed) and there is no requirement to remove it. In this case, it is mostly hidden behind drywall where it is less likely to deteriorate. More information can be found at the Health Canada website: www.hc-sc.gc.ca. If asbestos removal is desired at some point in the future (e.g. during basement renovations), the work needs to be professionally done – consult contractors for quotes.

Plumbing:

The incoming City supply pipe has been upgraded to ¾ inch copper where visible. The supply piping *within* the house is mostly copper, but there is some PEX plastic (not visibly KITEC) and galvanized steel in the basement. Water pressure is somewhat less than expected for the size of the incoming water pipe. It is possible that the galvanized pipe in the basement is affecting the pressure (due to potential rust clogging). The galvanized pipe will likely need to be replaced for insurance reasons as it rusts from the inside and will eventually perforate. It is apparently mostly restricted to the basement at ceiling level, the basement toilet and the vertical riser near the water meter. It is actively leaking by the boiler water supply disconnect valve. Consult a plumber regarding replacement costs - could be \$2,000 and up.

The waste plumbing is a combination of cast iron, copper, galvanized steel (for venting) and ABS plastic. Cast iron waste plumbing is currently an issue for some insurance companies (although their prejudice is not considered to be warranted in our opinion) – if any cast iron waste is exposed during renovations that would be a good opportunity to replace it with plastic.

Minor Deficiencies:

- Resecure the loose laundry faucet.
- The mechanical vent configuration for the main floor powder room sink

Inspection Methods and Limitations:

- Concealed plumbing cannot be inspected.
- Tub/sink overflows not tested.
- Isolating/relief valves and main shut-off valve not tested.

Interior:

- The original plaster in a number of areas shows typical cracks and imperfections. Many of these can be patched when painting.
- Many of the windows were replaced about 5 - 6 years ago and are in good overall repair.
- The living room fireplace is not currently used and the damper area has been sealed up with polystyrene board insulation. It is intended to be operable, but would have to be inspected (by a WETT-certified specialist) after the insulation is cleared away in order to make a proper assessment. We did note that the hearth is shallow by current standards. Considering its location over the "furnace" room, it would be a good candidate for conversion to gas.
- The master bedroom electric fireplace could not be functionally tested as we could not locate the remote control.
- The basement stairs are supposed to have a handrail.
- The basement was dry at the time of the inspection and no evidence of active leakage was visible or found with a moisture meter or thermal camera. There is efflorescence visible on some foundations and there are old water stains on basement baseboards. It is understood that there was some leakage that occurred when a contractor accidentally damaged the water line outside the house. At that point, exterior excavation was undertaken and a waterproof Delta-type membrane was installed along the east and west foundations in particular. Even though the front-facing membrane appears to be oriented incorrectly, it should still prove to be functional. It is assumed that the basement is generally dry at this point. Obviously, the house is old and the foundations are not watertight. As with all older homes, it is important to keep eavestroughs and downspouts well maintained and to prevent surface water accumulations near the house by promoting good drainage next to the foundations through good grading.

Inspection Methods and Limitations:

- No comment made on cosmetic aspects of interior finishes.
- CO/smoke detectors and appliances not inspected.
- Drainage tile (if any) not visible.
- In all houses, moisture problems may result in visible or concealed mold growth. Environmental Consultants can assist if this is a concern as inspection for mold is a specialized environmental assessment beyond the scope of the inspection and the Inspection Standards.

Notes:

This is the inspection report for 40 Arcadian Circle, Toronto – performed on January 20, 2016. For the purposes of this report, the front of the house is considered to be facing north. The inspection was performed according to the standards of the Ontario Association of Home Inspectors – see Limitations and Conditions at www.yeatesinspect.com/lim&cond.htm.

Telephone consultation regarding this report is available free of charge – call 416-422-1571. Walkthroughs with the inspector can also be arranged at a typical cost of \$150.