

The Corporation of the City of Owen Sound

By-law No. 2021-XXX

A By-law to authorize Backflow Prevention Requirements within the City of Owen Sound

WHEREAS section 11 of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended, provides that The Corporation of the City of Owen Sound (the "City") may pass by-laws relating to public utilities, including matters affecting water distribution, and for the purposes related to health, safety and well-being of persons; and

WHEREAS section 80 (1) of the *Municipal Act, 2001*, provides that a municipality may at reasonable times, enter on land to which it supplies a public utility to inspect, repair, alter or disconnect the service pipe or wire, machinery, equipment and other works used to supply the public utility; and

WHEREAS subsection 11(1) of the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32, as amended, requires every owner of a municipal drinking water system to ensure that all water provided by the system meets the requirements of drinking water quality standards and that the drinking water system is operated in accordance with the *Safe Drinking Water Act, 2002*; and

WHEREAS section 19 of the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32, as amended, requires every person who oversees or has decision-making authority over a municipal drinking water system to exercise the level of care diligence and skill that a reasonable prudent person would be expected to exercise in a similar situation and act honestly competently and with integrity with a view to ensuring the protection and safety of the users of the municipal drinking water system; and

WHEREAS Part 7 (Plumbing) of Ontario Regulation 332/12: Building Code requires potable water systems to be protected from contamination; and

WHEREAS contamination of the City's drinking-water system can arise as a result of a backflow incident from a private plumbing system that is attached to the City's municipal drinking water system and such contamination of the

municipal drinking water system can have an adverse impact on the health, safety and well-being of the users of the City's drinking water; and

WHEREAS the City desires to put mechanisms in place so as not to permit the discharging of a contaminating substance into the municipal drinking water system; and

WHEREAS on December 7, 2018, City Council passed Resolution No. R-181217-027 directing staff to implement a backflow prevention plan as outlined in , staff report OP-18-048 presented to the Operations Committee on November 13 2018, Which plan included bringing forward a by-law to authorize backflow prevention requirements within the City

WHEREAS staff report OP-021-051 presented to the Operations Committee on December 7, 2021 provided further information seeking direction with respect to this bylaw

NOW THEREFORE the Council of The Corporation of the City of Owen Sound enacts as follows:

Part I. Short Title, Definitions and Interpretation

Short title

1. This sort title of this by-law shall be the "Backflow Prevention By-Law."

Definitions

2. In this by-law:

"Authorized Functions List" means a list of functions and the persons authorized to carry out such functions as set out in Schedule 'B'.

"Auxiliary Water Supply" means any water supply on, or available to, the premises other than the Municipal Drinking Water System supply.

"Backflow" means the flowing backward or reversal of the normal direction of the flow of water.

"Backflow Prevention Survey" means a survey and inspection completed by a Tester to identify water service connections present, the backflow hazards associated, and any protection of backflow prevention currently installed or required.

“Building” as defined in the Building Code.

“Building Code” means the *Building Code Act, 1992, S.O. 1992, c.23* as amended and any regulations made under that Act.

“City” means The Corporation of the City of Owen Sound and where an authority or discretion is conferred upon a City official under this By-law, means the appropriate official or representative of the City as designated or appointed under its governing by-laws, resolutions or policies from time to time.

“City Engineer” means the individual in charge of Engineering or that person’s designate or any person duly authorized to act in that person’s place.

“Compliance Notice” means a notice prescribed by the City, identifying deficiencies that shall be corrected.

“Corrective Actions Form” means a form issued by the City with the Compliance Notice, to be completed by the owner and submitted to the City, notifying the City that the requirements of the Compliance Notice have been completed.

“Contractor” means a *person, partnership, or corporation* who contracts to undertake the execution of work commissioned by the *owner* or the *City* to install or maintain water mains, *water services, hydrants and other appurtenances or devices.*

“County” means The Corporation of the County of Grey.

“Cross-Connection” means any temporary, permanent, or potential water connection between a source of potable water and any source of pollution or contamination and includes any bypasses, jumper connection, removable section of pipe, swivel or changeover and any connecting arrangement through which may allow backflow of contaminants.

“Device” means a backflow preventer that prevents the backflow of water into the waterworks and/or private water system and is designed to prevent contamination of potable water.

“Fire Protection System” means an assembly of pipes and fittings that conveys water from the water service pipe to the fire sprinkler or standpipe outlets.

“Good Working Condition” means:

- a. free from health hazard;
- b. free from fire hazard;
- c. not in poor condition by reason of deterioration, neglect, damage or defacement;
- d. able to perform its intended function; and
- e. protected from freezing.

“Hazard Classification” means a valuation of the hazard status as defined in the CAN/CSA - B64 10 Standard by the following scale:

- a. Minor
- b. Moderate
- c. High or Severe.

INSPECTION means an examination and includes any of the following:

- a. an audit;
- b. physical, visual or other examination;
- c. survey;
- d. test or inquiry.

“Irrigation System” means a system designed to apply controlled amounts of water to plants and includes sprinkler heads, piping and other components that are used primarily to apply water to vegetation.

“Municipal Drinking Water System” means a drinking water system, within the meaning of subsection 2(1) of the *Safe Drinking Water Act, 2002* supplied by the City.

“Municipal Plumbing Inspector” means a person appointed a Plumbing Inspector by the County or the City.

“Non-Potable Water” means water that is not meant or approved for human consumption.

“Occupier” means any person or persons of the age of 18 years or older in possession of a property.

“Owner” means the registered owner or owners of a premises or their authorized agents.

“OWWA” means Ontario Water Works Association, a section of the American Water Works Association (AWWA).

“Person” means a legal entity and includes individuals and corporations.

“Plumbing Permit” means an official document issued under the authority of the County or City giving someone authorization of an alteration/and or connection to the plumbing of a property.

“Potable Water” means water that is safe for human consumption.

“Premises Isolation” means separation of the water supplied to private properties from the Municipal Drinking Water System, via a device.

“Private Water System” means the portion of the water service pipe located on private property;

“Registered List of Testers” means a list of contractors who are authorized to perform functions required under the by-law as indicated on the Authorized Functions List, that are Testers and have registered with the City Engineer.

“Site Plan” means a graphical plan of a proposed or existing development illustrating all the features of the development including dwellings, commercial establishments, roads, and other public or private infrastructure that has been approved by the City Engineer.

“Tester” means a person who is certified by the OWWA, or equivalent, to test device(s) and who is currently registered in the OWWA database of Testers.

“Test Tag” means a tag provided by the City, attached to a device, indicating that the device is in good working condition as indicated through the test report.

“Test Report” means a report in the form as prescribed by the City to test a device.

“Water Meter” means a device supplied and owned by the City, at the owner’s expense, to measure the quantity or rate of potable water flowing through a pipe that is used to supply a building.

“Water Service” means the pipes and fixtures used for the purpose of supplying potable water from the Municipal Drinking Water System to any building or land.

“Waterworks” means any mechanisms used for the collection, production, treatment, storage, supply, transmission and distribution of potable water by the City, up to the water service connection, but does not include plumbing to which the Building Code applies.

Interpretation

3. The division of this by-law into parts and the insertion of headings are for convenient reference only and shall not affect the interpretation of the by-law.
4. References to words in the plural include the singular, as applicable.
5. References to laws in this by-law refer to the statutes, as amended from time to time, which are applicable within the Province of Ontario.
6. The terms and provisions of this by-law are severable. If any term or provision is found by a court of competent jurisdiction to be legally unenforceable, inoperative or invalid, the remainder of the by-law continues to be in full force and effect.
7. In the event of a conflict between the provisions of this by-law and the *Municipal Act, 2001* or any other legislation, the provisions of the legislation shall prevail.

Part II. APPLICATION

Scope

8. This by-law applies to all properties within the City, except buildings of only residential occupancy serviced from the Municipal Drinking Water System.

City Engineer determined

9. Notwithstanding Section 8 above, this by-law applies anywhere the City Engineer determines that a condition exists in any building or on any property serviced from the Municipal Drinking Water System that may be hazardous or detrimental to the Municipal Drinking Water System or any private water system.

Part III. CROSS CONNECTION REQUIREMENTS

Cross-connections - prohibited

10. No person shall connect or permit any piping, fixture, fitting, container, appliance, equipment, or the like, in a manner which under any circumstances may allow non-potable water or any other liquid, chemical, gas or substance to enter the Municipal Drinking Water System.

Backflow prevention device - premise and fire system isolation

11. Every owner of property to which section 8 applies, shall ensure that premise isolation and, where applicable, fire protection system isolation, is in place based on the hazard classification of the property on every existing, new, or temporary, water service supplied by the Municipal Drinking Water System.

Guide to Degree of Hazards

12. The "Classification Guide to Degree of Hazards", attached as Schedule 'A' to this by-law, shall be used to determine the hazard classification for each applicable property. When the type of property is not identified in the Guide, or the property is labeled with more than one degree of classification, the City Engineer shall determine the hazard classification on a case by case basis.

Levels of protection – Premises Isolation

13. Premises shall be isolated with devices as follows:
 - a. premises with a moderate hazard classification shall be isolated with a Double Check Valve Assembly device;
 - b. premises with a severe hazard classification shall be isolated with a Reduced Pressure Principal Assembly device; and
 - c. premises that require protection in accordance with Section 9 shall follow what is required as recorded in the CSA B64 10.

Exceptions to protection

14. Despite sections 12 and 13, the City Engineer may require or permit an alternative device to be used in respect of a unique cross-connection condition, provided the requirement or permission is in writing and includes reasons for the exception.

Existing device

15. All properties applicable with existing water services supplied by the Municipal Drinking Water System that have previously installed a device shall complete a Backflow Prevention Survey and assure compliance with all requirements of this by-law.

Part IV. APPLICATION OF THE CSA STANDARD

In accordance with the CSA Standard

16. The owner shall ensure all devices are selected, installed, replaced, and maintained in accordance with this by-law, the Building Code, and the CAN/CSA - B64 10 Series Standard.

Conflict of provisions

17. Whenever the CSA Standard and this by-law are in conflict, the provisions of this by-law shall prevail.

Part V. SELECTION OF BACKFLOW PREVENTION DEVICE

Backflow Prevention Survey – when to complete

18. An owner shall, at their expense, have a survey conducted of the water service connections for each property owned by completing a City issued Backflow Prevention Survey when any of the following occur:
 - a. when requested by the City Engineer;
 - b. prior to initial installation of a device;
 - c. every five years after the initial survey;
 - d. whenever the hazard classification on the property has changed;
 - e. when ownership of the property has changed; and
 - f. when circumstances at the property or the equipment has changed and such change either alters or has the potential to alter the information contained in the most recent Backflow Prevention Survey provided to the City.

Backflow Prevention Survey – who must complete

19. An owner shall ensure that a Backflow Prevention Survey is carried out by a Tester who is authorized to perform this function, as identified in the Authorized Functions List, attached as Schedule 'B', and the survey

shall be provided to the City within thirty (30) calendar days of any of the events occurring listed in section 18.

Compliance Notice

20. Following the City's review of the Backflow Prevention Survey the owner shall receive a Compliance Notice that identifies whether the City supports recommendations contained in the survey and/or includes additional or alternative requirements, which shall be completed.

Corrective Actions Form

21. All requirements outlined in the Compliance Notice shall be completed and recorded on the Corrective Actions Form prescribed by the City and submitted within the timeframe allotted.

Part VI. INSTALLATION OF BACKFLOW PREVENTION DEVICE

Tester obligations

22. Every Tester installing and testing a backflow prevention device shall ensure that:
 - a. the device is installed in accordance with manufacturer's specifications and the CSA - B64 10 Series Standard;
 - b. the device installed is a testable device;
 - c. the device is installed downstream of the water meter as per manufacturer's instructions, prior to any tapping, or where circumstances require, in an alternate location that is to the satisfaction of the City Engineer;
 - d. there is compliance with all requirements on the Authorized Functions List;
 - e. a test report, provided by the City, is completed for each device tested and submitted to the City, in the format prescribed, within ten (10) business days of the performance of the test; and
 - f. after each device has passed testing requirements, the Tester shall complete and affix a test tag that is provided by the City, to the device or immediately adjacent to the device on the piping connected thereto.

Owner obligations

23. Every owner shall ensure that:

- a. all piping between the water meter and the premises isolation device has no cross-connections;
- b. all piping between the water meter and a premises isolation device is clearly labeled "no connections permitted"; and
- c. every device installed is in good working condition at all times while the water service is in use.

Accessibility

24. Every device shall be installed in a location that is readily accessible for operational, renewal, servicing, maintenance and inspection purposes without the use of a portable ladder or the necessity of climbing over or removal of an obstacle; subject to discretion by the City Engineer.

7.4 Unauthorized removal of device prohibited

25. No person shall remove or permit the removal of a device or part thereof after it has been installed, unless such removal is permitted by this By-law.

Subsidy When Available

26. The City has the discretion to fund a program to subsidize the installation cost of required premise isolation and fire protection system isolation devices. The subsidy shall apply to works required for premise isolation, but not those required for zone isolation. Only buildings which receive occupancy permit approval status prior to December 31 2021 will be eligible for the subsidy. This subsidy would be subject to the following conditions:
 - a. That the Owner acknowledges that the contractual relationship to install the device and any required appurtenances exists between the Owner and the Contractor, that the device is owned by the Owner solely, with the City subsidizing the cost, and
 - b. That the Owner has solicited quotations for the work from qualified contractors approved by the City Engineer or designate, has provided copies of those quotations to the City Engineer or designate, and has retained the lowest bidding contractor, and
 - c. That the Owner shall submit invoices for the work performed by the contractor, complete with proof of payment, within 30 days of the date of the invoice, and

- d. In no case will the City reimburse the cost of the work undertaken during a given calendar year, when the invoice and proof of payment is received later than January 31 of the following calendar year.

Part VII. PLUMBING PERMITS

Permit required

- 27. Every owner required to install a device shall obtain a Plumbing Permit prior to installation.

Permit requirements - renovation or reconstruction

- 28. For all newly constructed, renovated or reconstructed properties that require premises isolation, the owner shall provide a site plan, drawings and otherwise ensure the water service is protected via a premises isolation device and is in compliance with the CSA - B64 Series Standard. Site plans shall meet all requirements as outlined in this by-law and any additional requirements of the City Engineer before a Plumbing Permit is issued.
- 29. Plumbing Permits shall not be issued until a Backflow Prevention Survey has been completed.

Plumbing Inspection

- 30. Every device installed shall be inspected by a Municipal Plumbing Inspector. The owner or a person authorized to act in their place shall contact the City or County to request final inspection by the Municipal Plumbing Inspector.

Part VIII. TESTING OF BACKFLOW DEVICE

Testing Requirements

- 31. Every owner who has a device required under this by-law shall ensure that the device is inspected and tested at the installation location by a Tester when first installed and annually thereafter, or immediately after the device is cleaned, repaired, overhauled, serviced, relocated or inactive for a period of 90 days or longer.

Premises Isolation on Uninterrupted services

32. Properties requiring premises isolation where the water service is unable to be interrupted for testing and maintenance shall install, in parallel, a bypass around the device, with the bypass protected also via a device that is equivalent to allow for annual testing and maintenance of both devices.

Tester shall be registered

33. Every Tester who tests a device shall register with the City's Registered List of Testers prior to performing any functions listed on the Authorized Functions List.

Testing in accordance with CSA Standard

34. Every Tester who registers with the City to perform testing and maintenance on devices shall carry out such work in accordance with this By-law, the CSA Standard, and all applicable legislation.

Device malfunction

35. Upon finding that a device has failed initial testing, the Tester shall take the device out of service and inspect and a retest shall be completed immediately after necessary cleaning, repairs and/or replacements are made.

Retest

36. If a device fails the retest the Tester shall:
 - a. Immediately take the device out of service;
 - b. Immediately replace the device or have the water service shut off; and
 - c. Provide written confirmation of the failure to the City Engineer within forty-eight hours of the retest.

Part IX. INSPECTIONS AND ACCESS TO DEVICE

Notice of inspection

37. Upon notice the City shall have free access, at all reasonable times, to perform an inspection on a private water system, including but not limited to a water meter, a fire protection system or a device.

Notice to conduct work

38. Upon notice the City shall have free access, at all reasonable times, to parts of every building or other grounds to which the Municipal Drinking Water System supplies, to alter, repair, replace, or disconnect any water service pipe, wire, rod or cross-connection.

No notice - Emergency

39. Notwithstanding sections 10.1 and 10.2, in the case of a perceived emergency the City shall have free access at any time, without the requirement to provide notice in order to remove any immediate threat or hazard to the Municipal Drinking Water System.

Part X. CONTRAVENTIONS AND WORK ORDERS

Work Orders for Contravention

40. Where the City is satisfied that a contravention of this By-law has occurred, the City may issue a work order requiring the owner or occupier of the land on which the contravention occurred, to do work to correct the contravention.

Work Orders

41. The order referred to in section 39 shall:
- a. include reasonable facts of the contravention which identify the contravention and the location of the property on which the contravention occurred;
 - b. indicate the time for complying with the terms and conditions of the order and give notice that, if the repair or clearance is not carried out within that time, the City may carry out the work at the owner's expense; and
 - c. be served or caused to be served to the owner or occupier:
 - i. by personal service; or
 - ii. by prepaid registered mail sent to the last known address of the person to whom notice is to be given or to that person's agent for service.

Last known address

42. For the purposes of subsection 40(c)(ii), "last known address" of the owner includes but is not limited to the address provided to the City for the payment of property taxes for the property or the address for service on the title document for the property.

Work Order – cost and expense of the owner

43. If the owner or occupier of a property fails to comply with a work order issued under sections 40 and 41 within the prescribed time set out in the order, the City may cause the property to be brought into compliance.
44. The City or a person acting on its behalf is not liable to compensate the owner, occupier or any other person by reason of anything done by or on behalf of the City in the reasonable exercise of its powers.
45. The City may recover the costs of doing a matter or thing from the person directed or required to do it by action or by adding the costs to the tax roll and collecting them in the same manner as property taxes as outlined in section 446 of the *Municipal Act, 2001*.

Other reasonable measures

46. In addition to any other provisions of this By-law, the City may at any time order an owner, at their expense, to conduct tests, provide reports and undertake any other reasonable measures required for the prevention of backflow or of a cross-connection on any water service connection or private water system.

Damages

47. Without prejudice to any other legal rights of recovery, where a contravention of this bylaw causes damage or an expense to the *City*, the cost may be added to the tax roll of the responsible property, and such cost shall represent a lien against the land.

Part XI. PENALTIES

Fine – for contravention - individual

48. Every individual who contravenes a provision of this by-law is guilty of an offence and upon conviction, shall be liable, for every day or part thereof upon which such offence occurs or continues, to a fine of up to \$5,000 per day for a first offence and to a fine of not more than \$20,000 per day for any subsequent offence.

Fine - for contravention – corporation

49. Every corporation who contravenes a provision of this by-law is guilty of an offence and upon conviction, shall be liable, for every day or part thereof upon which such offence occurs or continues, to a fine of up to

\$5,000 per day for a first offence and to a fine of not more than \$100,000 per day for any subsequent offence.

Discontinue use of water

50. The City may turn off a water service or refuse to turn on a water service to any property and may discontinue service to any property if the owner has contravened a provision of this bylaw.

Part XII. Schedule and Effective Date

Schedules

51. The following Schedules are attached to and form part of this by-law:

Schedule A – Classification Guide to Degree of Hazards

Schedule B – Authorized Functions List

Effective Date

52. The by-law shall come into full force and effect on the date that it is passed as which time all by-laws policies and resolutions that are inconsistent with the provisions of this by-law are hereby repealed, revoked or rescinded, as the case may be, insofar as it is necessary to give effect to the provisions of this by-law.

FINALLY PASSED AND ENACTED this XXX day of XXX, 2019.

Mayor Ian C. Boddy

Briana M. Bloomfield, City Clerk

Schedule A: Classification Guide to Degree of Hazards

PROPERTY	CLASS	PROPERTY	CLASS
Abattoir (slaughter house)	Severe	Camp site	Moderate
Airport	Moderate	Camp site with RV hook-ups or dump station	Severe
Animal feed lot	Moderate to Severe	Car wash	Severe
Animal stock yard	Moderate to Severe	Chemical Plant	Severe
		Church	Minor to Moderate
Aquaculture farm	Severe	College	Moderate
Aquarium (public)	Severe	Commercial premises	Moderate to Severe
Arena	Moderate	Concrete plant	Severe
Asphalt plant	Severe	Dental office	Moderate
Auto body shop	Severe	Dental surgery facility	Severe
Auto dealership	Moderate	Dockside marine facility or marina (pleasure boat)	Moderate to Severe
Automotive Plant	Severe	Dry cleaning plant	Severe
Automotive repair shop	Severe	Dry cleaning facility (no dry cleaning process on premises)	Moderate
Beverage processing plant	Severe	Duplex housing with shared service	Minor
Blood clinic	Severe	Dye plant	Severe

PROPERTY	CLASS	PROPERTY	CLASS
Exhibition ground	Severe	Grocer	Moderate
Farm	Moderate to Severe	Hair salon	Moderate
Film or photo processing facility	Severe	Hospital	Severe
<i>Fire Protection System</i> connected to more than one of the following different sources of supply: <ul style="list-style-type: none"> • <i>City</i> water supply system, • a private water supply system, • or a source of non-potable water 	Moderate to Severe	Hotel	Moderate
Fire station	Moderate to Severe	Industrial and Institutional	Moderate to Severe
Fish farm or hatchery	Severe	Kennel	Moderate
Food processing plant	Severe	Laboratory	Severe
Fuel dispensing facility	Moderate	Laundry (commercial)	Severe
Funeral Home	Moderate to Severe	Laundry (commercial, coin-operated)	Moderate
Garbage transfer facility	Severe	Mall – multi-tenant	Moderate
Golf course	Moderate to Severe	Manufacturing Plant (not specified)	Moderate

PROPERTY	CLASS	PROPERTY	CLASS
Meat Packing plant	Severe	Pharmaceutical manufacturing facility	Severe
Medical clinic (non-surgical)	Moderate	Plant using radioactive material	Severe
Medical clinic (surgical)	Severe	Plastic manufacturing plant	Severe
Milk processing plant	Severe	Plating shop or plant	Severe
Mining facility	Severe	Poultry farm	Severe
Mobile home park	Moderate	Power generating facility	Severe
Mortuary or morgue	Severe	Premises with access to an auxiliary water supply	Severe
Motel or Hotel	Moderate	Premises where access prohibition or restricted	Severe
Motorcycle repair facility	Severe	Printing Plant	Severe
Multi-service interconnected facility	Moderate	Pulp and/or paper plant	Severe
Multi-tenant single serviced facility	Moderate	Radiator shop	Severe
Nursing Home	Moderate	Recycling facility	Severe
Office Building	Minor to Moderate	Refinery, petroleum processing	Severe
Oil Refinery	Severe	Rendering facility	Severe
Paint manufacturing plant	Severe	Research facility	Severe

Petroleum processing or storage facility	Severe	Residential premises (single water service less than 50 mm diameter with no moderate or severe cross-connections)	Minor
PROPERTY	CLASS	PROPERTY	CLASS
Restaurant	Moderate	University	Moderate to Severe
School	Moderate	Veterinary clinic	Moderate to Severe
Sewage dump station	Severe	Veterinary clinic (special equipment)	Severe
Sewage treatment plant	Severe	Waste disposal	Severe
Steam boiler plant	Severe	Wastewater facility	Severe
Steel manufacturing plant	Severe	Wastewater pump station	Severe
Storage Warehouse	Moderate	Wastewater treatment plant	Severe
Swimming pool facility	Moderate	Water filling station	Severe
Technical Institute	Minor to Moderate	Water Park	Moderate
Townhouse (shared service)	Minor to Moderate	Water treatment plant	Severe
Track-side facilities for trains	Severe	Water treatment pump station	Severe

Schedule B: Authorized Functions List

Item	Function	Licensed Water Operator employed by City of Owen Sound with Tester Certification ⁴	Professional Engineer with Tester Certification	Certified Engineering Technologist with Tester Certification ¹	Licensed Master Plumber with contractor's license and with Tester Certification	Journeyman Plumber with Tester Certification ²	Apprentice Plumber with Tester Certification ³	Fire protection system Sprinkler fitter with Tester Certification	Industrial Millwright with Tester Certification	Irrigation System Installer with Tester Certification	Steamfitter with Tester Certification
1	Carry out a backflow prevention survey	✓	✓	✓	✓	✓					
2	Install, relocate, or replace backflow prevention device	✓			✓	✓	✓				
3	Repair backflow prevention device	✓	✓	✓	✓	✓	✓				
4	Test backflow prevention device ⁵	✓	✓	✓	✓	✓	✓	✓	✓	✓	
5	Complete items 1, 2, 3 & 4 in relation to fire protection systems		✓	✓	✓	✓	✓	✓			
6	Complete items 2, 3 & 4 in relation to irrigation systems	✓	✓	✓	✓	✓	✓			✓	
7	Complete items 1, 2, 3, & 4 in relations to heating and cooling systems										✓

1. Required to be under the direction of a Professional Engineer
 2. Required to be employed by a licensed plumbing contractor
 3. Required to be employed by a licensed plumbing contractor under the direct supervision of a journeyman plumber or master plumber
 4. Must be employed with the City of Sarnia under the direction of a Professional Engineer, completing work for the City of Sarnia
 5. Anyone with a Tester's license as per CAN/CSA-B64.10, as amended, is permitted.
- Certification as per CAN/CSA-B64.10, as amended: please refer to the definition for Tester

✓Authorized to perform function