



Professional Engineers Ontario - Certificate of Authorization # 100205934
www.buildingexpertscanada.com

POOL PERMIT PLANS & DRAWINGS

Residential swimming pools are a common feature used today to extend the living area of the house beyond its walls. Approved pool enclosure permit drawings and site plans, grading plans and pool enclosure details are not required to install a pool, hot tub, pond or whirlpool. Under the municipal bylaws a swimming pool requires a pool fence enclosure and approved pool enclosure permit drawings and site plan, grading plan and pool enclosure details for the construction of a pool enclosure fence on private lots. For decks in conjunction with swimming pools and/or hot tubs, approved deck permit drawings may be required.

If the swimming pool depth (body of water) is more than 600mm, installation of a pool enclosure fence prior to filling the pool is required as per the municipal by-laws. This applies to inflatable pools and manmade ponds as well. For hot tubs, whirlpools and spas, a pool fence enclosure is not required if a 50mm thick affixed cover capable of holding 90kg is kept locked when not in use.

If construction of the pool will affect the neighbour's property, such as damaging sod with heaving equipment, removal of existing fencing between the two lots etc., the municipality may require a signed permission letter from the neighbour prior to construction, and a signed acceptance letter once all of the work is completed. Take photos of the existing conditions of any municipal property and adjacent neighbour's property prior to the construction of the pool to protect from potential liability should any damage of municipal or private property be identified upon completion of construction of the pool.

If the property is designated under the Ontario Heritage Act, a heritage permit may be required. Heritage permit process that will impact timelines. The pool enclosure permit approval may be delayed should additional permit approvals from other agencies be required (i.e. [Conservation Authority](#), Regional Municipality, [Hydro One](#) etc.). A copy of their approval or permit is required to be provided to the municipality prior to the pool enclosure permit can be approved.

Regardless of whether or not it is believed that the utilities may be affected, the Ontario Health & Safety Act (OHSA) mandates to locate and mark buried utilities before excavating for the construction of an inground swimming pool.

Overhead electrical wires are not permitted directly above open swimming pool water. Ensure that a licensed electrician installs all electrical connections to a swimming pool or pool-related equipment. An electrical inspection by the Electrical Safety Authority (ESA) is a required part of the process. Keep electrical devices, such as radios, electric lawnmowers and trimmers well away from the swimming pool. Ontario Electrical Safety Code requires all outdoor electrical outlets to have a ground fault circuit interrupter (GFCI) which can prevent or minimize shocks caused by faulty equipment.

Discharge from pool equipment must not affect neighbouring lots. No person shall backwash or drains a swimming pool in a manner that adversely affects any adjacent lots. When a swimming pool is drained, it is customary to use a pump, and the water should be disposed by means of a discharge hose to the gutter or ditch in front of the property or into the Municipal Storm Drainage System, being careful to ensure that the water flows away harmlessly.

Hoses or running water should not cross a neighbour's lot without first having permission from the neighbours themselves. When completely draining a swimming pool, it is important not to utilize too powerful a pump as large amounts of water are involved. Too much water at any one time will cause problems. A little forethought, and careful disposal of the water, will maintain good relationships in the neighbourhood.

Local municipalities regulate the size of the swimming pool and where on the property it can be built. Before planning to build a swimming pool, please check with the local municipal zoning department for required setbacks, lot coverage restrictions, easements and other requirements that pertain to construction of a swimming pool. A legal survey will have easements clearly marked.

A setback is a distance that must be maintained from the property line that cannot be built upon. Setbacks act as buffer zones to help alleviate development problems such as being too close to the adjacent neighbor. A proposed swimming pool that encroaches into a property setback will most likely need a minor variance application to obtain a pool enclosure permit. Designated sections of land set aside for the purposes of maintaining proper water tables, water run off, drainage, flood control and for protected areas. The municipality and the conservation authorities may require a pool to be located away from a watershed area. If the property does not have municipal services, in determining the placement of a pool, the septic system must remain serviceable and able to be replaced in the future. While a swimming pool is being installed, it is a requirement that temporary swimming pool fencing be installed and maintained, preventing unauthorized access to the swimming pool site. Every swimming pool while under construction shall be enclosed with a temporary swimming pool enclosure until such time as construction of the swimming pool is completed and a swimming pool enclosure has been erected.

When planning to install a swimming pool, it is important to investigate insurance responsibilities. Most insurance companies recommend that the liability insurance on a property be increased when a swimming pool is installed.

Where a main building forms part of the swimming pool enclosure, the main entry into the building shall not be located inside the swimming pool enclosure.

Where a building or structure forms part of a swimming pool enclosure, no window or other opening shall open into the area enclosed by the swimming pool enclosure unless such window or opening is capable of being securely closed and latched.

Every gate in a swimming pool enclosure shall be self closing and shall be equipped with a lockable self-latching device located on the top interior side of the swimming pool enclosure. Such gates shall not have any member or attachment that would facilitate the climbing of the gate and shall be supported on substantial hinges. The minimum height of any gate or entry shall be 1.2m. Swimming pool enclosures shall be constructed as follows:

1.5 m high Chain link fences must be constructed of not greater than 40mm diamond mesh.

A wooden fence shall conform to the following:

vertical boards shall be spaced not more than 38mm apart where rails are spaced closer than 1.1m and not more than 100mm where rails are spaced at least 1.1m apart.

vertical boards shall be of not less than 19mm x 89mm lumber and shall be attached to rails that are not less than 38mm x 89mm in size. The rails shall be supported on substantial posts with a minimum dimension of 89mm x 89mm spaced not more than 2.4m apart and imbedded to a minimum depth of 900mm below grade.

FENCE SPIKES are not permitted for use with wooden fence posts.

Wrought iron or similar fencing must be a minimum height of 1.5m with vertical members spaced no more than 100mm apart. A 0.3m x 0.3m plate must be provided over the gate latch to prevent access to the latch.

Where a swimming pool enclosure or temporary enclosure is a building, accessory building or structure, it shall be constructed of materials that will withstand weathering and will remain in place when reasonable loads are applied. No swimming pool enclosure or temporary enclosure shall have any unprotected openings that would permit the passage of a sphere larger than 100mm in diameter within or below the enclosure. No swimming pool enclosure or temporary enclosure shall have any members or attachments that could facilitate climbing on the exterior face of a swimming pool enclosure or temporary enclosure for a distance between 100mm and 1.2m from the grade. No condition that facilitates climbing a swimming pool enclosure or temporary enclosure may be permitted to remain within 1.0m of the exterior of the swimming pool enclosure or temporary enclosure. No part of a Swimming Pool Enclosure shall contain barbed wire, electrical wire, sharp objects or materials, or any other objects or materials that would create a danger to the safety of any persons.

Where an above-ground swimming pool is a swimming pool enclosure:

- The exterior side of the above-ground swimming pool structure and any rail or guard attached thereto shall constitute a swimming pool enclosure. The owner of an above-ground swimming pool shall ensure that the means of entry within the swimming pool enclosure shall be kept closed and locked except when the swimming pool or enclosed area is in use by the owner, it's invitees or licensees. Where such means of entry is a ladder, the ladder shall be removable from the vicinity of the swimming pool or be designed to be lifted and locked or be designed to have a lockable cover when the swimming pool is not in use.

- The exterior sides of the above-ground swimming pool structure and the outside face of any rail or guard shall be constructed as a swimming pool enclosure, in a manner that will not facilitate climbing.
- Where a platform or deck is constructed adjacent to an above-ground swimming pool and such platform or deck is higher than 0.6m above the adjacent grade, a rail or guard of not less than 0.9m in height shall be provided around the outside perimeter of such deck. The combined height of the exterior sides of the swimming pool structure and any rail or guard attached thereto shall be a minimum of 1.5m and may be a maximum of 2.5m in height above the adjacent grade.

Land Survey

Swimming pools, fences, pool decks (concrete or wood), patio blocks, retaining walls, pool filters, hot tubs, storage sheds or any other equipment or structure should NOT be located within an easement or over the underground cable(s). The existing grade elevation over the easement or underground service cable is not to be raised or lowered by more than 15 cm. A fence along the edge of an easement is permitted. Existing structure, equipment and/or fences on any registered easements will need approval from the appropriate authority of the easement.

The municipality may require a land survey to determine if there are easements on the property in the vicinity of the proposed swimming pool. A copy of an old survey may not reflect the way the property is now, and may not be useful for municipal purposes. A new legal / boundary survey with topographic and easement details prepared by a licensed Ontario Land Surveyor for a lot less than $\frac{1}{4}$ acre in size would typically cost \$1,790 and could be completed in 3 to 4 weeks.

Additional Charges:

Sloped and/or difficult terrain and/or excessive vegetation may cost extra.

Visibly Marking Boundaries with Stakes: \$95 per side

Additional Monuments: \$95 per monument

Stakeout for the pool and/or pool fence enclosure \$395 per site visit - Four day notice is required for stakeout.

Surveyor's Real Property Report - Conduct Final Survey and include new swimming pool, pool enclosure and changes to the grading, etc.) \$495- Four day notice is required for Surveyor's Real Property Report

Final Grading Certificate - \$395 per site visit - Four-day notice is required for Final Grading Certificate.

Arborist Report

An Arborist report is required where there are municipal trees along the frontage of the subject property and where there are trees on the subject property and/ or neighbour's property that could be damaged as a result of the construction of a pool. Where trees are to be retained and protected, a tree preservation plan which identifies and details tree protection methodology to be implemented prior to construction and maintained for the full duration of construction. Typical arborist report and tree protection plan may cost \$895 plus \$45 per tree.

Site Plan

A typical stamped engineering site plan showing:

pool and property dimensions;

distances to the house and lot lines;

location of any doors and windows in the house adjacent to the pool area;

location and height of proposed fence;

percentage of hard versus soft landscaping

would cost \$995

Soft landscaping may include the water surface area of outdoor swimming pools or other ancillary structures used to hold water, such as fountains or artificial ponds.

Grading Plan

Any proposed grading changes and impervious landscaping beyond 1.2 m from pool water edge and/or less than 0.6m from the property line will require a grading plan designed by a professional engineer indicating that the pre-development conditions will be maintained. Inclusion of site drainage and grading plan designed by a professional engineer to the site plan indicating that the pre-development conditions will be maintained would cost \$795.

If a topographical survey is not available, an engineered topographical survey (starting at the back door sill and use it as the base point measurement, and assign a measurement value - NOT geodetic - to prepare the grading and drainage plan would cost additional \$795.

A final grading certificate indicating general conformity with the submitted design will be required prior to Occupancy/Final Inspection

Deck Permit

The required deck permit drawings showing

Details of footings, including footing size, spacing, depth, height above grade and frost protection details.

Sizes and locations of all columns; sizes, locations and spans of all beams

Stair Construction Details, including height and depth of stair treads and headroom above stairs (where applicable)

Guard Construction Details, including information about openings and climbability, and the location of the guards with respect to stairways, landings, and edges of the proposed platform would cost \$795.

Retaining Wall Permit:

Any retaining wall over 0.9m high shall be structurally engineered except that in geotechnically sensitive areas, the Chief Building Official may require a Geotechnical Engineer to design and inspect the method of retention. Structural engineering permit drawings for retaining walls would cost \$795.

Geo-technical report to establish the native soil depth and bearing capacity:

The municipality may require to provide a Geo-technical Report once the pool area is excavated to verify the placement of the pool will be on undisturbed native ground. It might be prudent to establish the native soil depth and bearing capacity prior to entering into a contract with the pool company to determine the necessary founding levels. If required a Geo-technical report to establish the native soil depth and bearing capacity would cost \$4,975.

Title Search

If a Title Search is required for the purpose of determining easements or other encroachments, it would cost \$95.

Geotechnical Slope Stability Analysis

The conservation authority and/or the municipality may require a geotechnical slope stability analysis for pools that are to be placed near slopes. Depending on the scope of work a geotechnical slope stability analysis may cost over \$8,975.

General Review

We also provide general reviews of the construction to determine whether the construction is in general conformity with the plans and other documents that form the basis for the issuance of a building permit.

We charge \$195 per site visit for general review and \$275 per review report. All general review reports will be forwarded promptly to the Chief Building Official.

To reduce energy costs associated with the pool:

Install [Energystar](#) certified [variable speed pool pumps](#). Keep intake grates clear of debris as clogged drains require the pump to work harder.

Utilize fencing, hedges and other similar landscaping to act as a windbreaker to reduce heat and water loss by sheltering the pool from prevailing wind.

Use a solar pool cover when the pool is not in use.

Use solar pool heater. For extended periods of cloudy and cooler weather, configure system with supplemental heat pump or gas/propane pool heater. Strategically set the temperature of the pool based on your usage. The most healthful swimming temperature is 25°C. If the pool is being only used during the weekends, reduce pool heater thermostat settings by 5°C to 8°C during the week or turn off the pool heater during the week. A solar pool heating system cannot heat during the night or a cloudy day and takes twice the time it takes the gas heater to heat. Heat pumps make the same amount of noise as central air conditioners and run continuously for hours at a time. Solar pool heating systems make no noise like gas pool heaters.

Install a cartridge filter or a robotic cleaner instead of a sand filter. Circulate water through a filter only once per day during off-peak hours when hydro rate is lower. To obtain maximum filtration and energy efficiency, regularly clean the filter.

Fiberglass pool is lighter, easy to maintain and Algae won't stick to smooth, nonporous fiberglass pool walls. Porous rough gunite (dry mix concrete) and shotcrete (wet mix concrete) pool walls are can be a breeding ground for algae and require regular scrubbing.

To reduce use of chlorine, bromine, salt and other pool chemicals, UV and ozone systems can be used along with a sanitation and chemical systems. Properly maintained pools are not a source of West Nile Virus.

Site Access

A huge factor in the construction cost and time of an inground pool project is site access. Rural area lots, corner lots, and lots backing onto an open property have wide open access areas to the pool area.

Site access area wider than 2.75m and higher than 4m would allow to use a small loader to move the excavated material to the dump truck. If the access area is wider than 1.75m and higher than 3m, it would allow to use a mini-excavator and a small loader or conveyor belt system. It is possible to install a pool in a yard with no access by using a very large crane and special attachments.

During the construction of the swimming pool, to place construction or landscaping materials on the street a Road Occupancy Permit is required.

Cost

Typically, an inground pool costs \$15,000 more than an above-ground pool. A fully equipped and installed heated inground pool with a heater, solar blanket and roller, automatic cleaner may cost over \$35,000 and larger sizes may cost over \$65,000. Fiberglass pool typically costs about \$6,000 more than a vinyl liner pool. Gunite/shotcrete pool costs \$6,000 to \$10,000 more than a fiberglass pool.

Minor Variance Application

A Minor Variance provides approval for a swimming pool that do not fully comply with the municipal Zoning By-law. A Minor Variance will not change the Zoning By-law, it merely grants a relief from certain existing provisions/standards of the By-law, where appropriate. Minor Variances are heard by the Committee of Adjustment. The Committee of Adjustment operates as a quasi-judicial tribunal in accordance with the authorization granted to it under the Planning Act. The Act directs the Committee of Adjustment with respect to the scope of its authority; the considerations that Committee of Adjustment must have when making any decision on an application presented to it; and the administrative provisions Committee of Adjustment must comply with regarding notice of applications and hearing procedure.

Our fee for applying for minor variance on behalf of the property owner and attending a committee of adjustment meeting is \$595+HST

For additional information, contact
[Building Experts Canada](#)

Edgar Labuac, P.Eng., Structural Engineer
Joo Min Park, MEng. - Municipal Engineering Specialist
Prince Reus - Architectural Designer
Aarthi Thaya – Project Manager

647 340 8649 (Direct Land Line);

647 877 8272 (Text Message)

Our service area includes the following municipalities:

Toronto ([City of Toronto](#)), Hamilton ([City of Hamilton](#)), Oshawa ([City of Oshawa](#)), Pickering ([City of Pickering](#)), Clarington ([Municipality of Clarington](#)), Ajax (Town of Ajax), Whitby ([Town of Whitby](#)), Brock (Township of Brock), Scugog ([Township of Scugog](#)), Uxbridge ([Township of Uxbridge](#)), Burlington ([City of Burlington](#)), Halton Hills ([Town of Halton Hills](#)), Milton ([Town of Milton](#)), Oakville ([Town of Oakville](#)), Brampton ([City of Brampton](#)), Mississauga ([City of Mississauga](#)), Caledon ([Town of Caledon](#)), Vaughan ([City of Vaughan](#)), Aurora ([Town of Aurora](#)), East Gwillimbury ([Town of East Gwillimbury](#)), Georgina ([Town of Georgina](#)), Markham (City of Markham), Newmarket ([Town of Newmarket](#)), Richmond Hill ([Town of Richmond Hill](#)), Whitchurch - Stouffville ([Town of Whitchurch-Stouffville](#)), King ([Township of King](#)), Bradford-West Gwillimbury ([Town of Bradford-West Gwillimbury](#))

BUILDING
EXPERTS CANADA LTD