

THE CORPORATION OF THE DISTRICT OF WEST VANCOUVER

Blasting Bylaw No. 4024, 1996

A bylaw to regulate and prohibit the use of explosive agents for blasting, and require persons engaged in blasting to give security for damage.

The Council of the Corporation of the District of West Vancouver, in open meeting assembled, hereby enacts as follows:

Definitions

1. In this bylaw:

- (a) **"Affected Owners"** means the owners or occupiers of parcels of land referred to in Section 5(k);
- (b) **"Application"** means a document in the form set out in Schedule A;
- (c) **"blast"** or **"blasting"** means the use of explosives for the purpose of moving, displacing or breaking rock or other material;
- (d) **"Blaster"** means the person, firm or corporation engaged by the Owner to conduct Blasting and includes an agent, contractor or employee of the Blaster;
- (e) **"Control Measures/Blasting Plan"** means a document that complies with the requirements set out in Section 5(h);
- (f) **"Director"** means the Director of Operations of the District and any person designated by the Director to exercise the Director's powers under this bylaw;
- (g) **"District"** means The Corporation of the District of West Vancouver;
- (h) **"Engineer"** means a professional engineer who specializes in rock mechanics and has expertise in blasting in urban areas, and is independent of the Blaster and acceptable to the Director and who is retained to carry out the duties under Section 7;
- (i) **"Hospital"** means a hospital or licensed hospital under the *Hospital Act*;
- (j) **"Letter(s) of Assurance"** means a document or documents, in the form set out in Schedule "E", to be completed, executed and delivered by the Engineer under Section 5(g);

- (k) “**Owner**” means the person registered in the Land Title Office as entitled to the fee simple of a parcel, holders of a registered right to purchase a parcel, or holders of a right of way in favour of a statutory authority on or over which the person proposes to Blast and a person authorized in writing by the Owner to act as the Owner's agent for purposes of this bylaw;
- (i) “**Permit**” means a document, in the form set out in Schedule B, to permit Blasting to be conducted;
- (m) “**Public Lands Application**” means an “**Application**” by a person other than the District, to Blast on a highway, park, right of way or other area that is owned or controlled by the District.

Prohibitions

- 2. Blasting is prohibited unless permitted by and carried out in accordance with the terms of this bylaw.
- 3. Without limiting the generality of Section 2, no person shall blast unless there is a valid Permit with regard to such blasting.
- 4. No person shall fail to comply strictly with the terms and conditions of a Permit issued under this bylaw.

Application for Permit

- 5. When an Owner proposes to blast, the Owner shall first apply to the Director for a Permit by providing each of the following:
 - (a) a completed Application;
 - (b) a copy of a valid Blasting Certificate issued to the Blaster by the Workers' Compensation Board (the original of which must be produced for inspection if required by the Director);
 - (c) an indemnity from the Owner in the form and with the content of that attached as Schedule C;
 - (d) a certificate of insurance providing coverage for the Blaster, the Owner and the other parties as specified in Schedule D against liability for loss or damage to persons or property as a result of blasting, which insurance shall remain in force while a Permit is valid;
 - (e) the fee set out in Schedule F, except that no fee is payable for an extension of a Permit in good standing;

- (f) if required by the Director, a topographic survey of the parcel (or the portion thereof) where the blasting is to be carried out, prepared by a B.C.L.S. or a professional engineer;
- (g) Letter(s) of Assurance;
- (h) a Control Measures/Blasting Plan, prepared by the Blaster and accepted in writing by the Engineer, which shall consist of a sketch of the blasting pattern and include the sequence of detonation and the maximum weight of explosives to be detonated per delay and shall specify measures designed to minimize potential injury to any person and avoid, control or minimize the impact of the blasting. If blasting is not proposed within 150 metres of any structure, utility line, railway, public or private road, street, lane, driveway or walkway or is not expected to produce a rock cut over 3.5 metres high, then the Director may waive the requirement for a Control Measures/Blasting Plan. During the continuance of the Permit, the Director may authorize amendments to the Control Measures/Blasting Plan which are approved in writing by the Engineer;
- (i) a report detailing how drill rigs and compressors are to be muffled, and the Director may require use of equipment to reduce or control noise levels;
- (j) information on the purpose for which blasting is being undertaken, the amount of material proposed to be removed, and such other information as is necessary to enable the Director to determine the amount of material permitted to be removed under the provisions of the Soil Removal and Deposit Bylaw or any other bylaw or policy of the District;
- (k) a report on the results of a preblast survey which shall be made of all principal structures and outbuildings, swimming pools, retaining walls, patios and driveways on any parcel of land within such distance of the blasting as the Engineer may specify. The Blaster shall cause the survey to be conducted after notice in writing to the Affected Owners (being the owners of the properties to be surveyed) and after giving the Affected Owners a reasonable opportunity to be present or to have an agent present. The report of the preblast survey shall identify by words and/or pictorially all observed damage to structures existing on the property inspected and anything that may be susceptible to damage from blasting and shall be signed by the person conducting the survey and by the Affected Owners. If any Affected Owner has refused entry to inspect or has not cooperated to arrange an inspection within 2 weeks of notice being given, or if the Affected Owner will not sign the survey despite a reasonable opportunity to do so, then the Director may, at the Director's option, waive this requirement.

- (l) For a Public Lands Application, the persons seeking permission to blast shall sign all forms, complete all requirements and bear all responsibilities, liabilities and costs under the bylaw and otherwise, as if they were the Owner, and the Director shall determine what will be required before the Director will accept the Application.

Permit

6.
 - (a) The Director may issue a Permit if the Owner has complied with Section 5 and if the Director is satisfied that the blasting is safe and complies with this and all other bylaws.
 - (b) Authority to blast under a Permit expires fourteen (14) days after the date of issuance of the Permit.
 - (c) The Director may, at the request of the Owner and upon receiving such information as the Director may require, extend from time to time the authority to blast under a Permit. The Director shall be satisfied that any policy of insurance or security provided under Sections 5(c) or (d) will remain in effect.
 - (d) The Director may cancel or suspend the authority to blast under a Permit if there are reasonable grounds to believe that the Owner or Blaster has done anything in violation of this bylaw or the Permit, or in violation of any agreement made pursuant to Sections 5(c) and (d). No person who has had his or her authority to blast under a Permit cancelled or suspended shall engage in or carry on blasting in the District unless special written permission to do so is given by the Director.

Monitoring of Blasting

7.
 - (a) The Owner shall, at the Owner's cost, retain the Engineer to act on the Owner's behalf to: complete the requirements of Section 5 that relate to the Engineer, to monitor the blasting and to ensure that the Blasting complies with the Blasting Plan, the Permit and the requirements of this bylaw.
 - (b) The Engineer shall immediately notify the Director if he or she has direct or indirect knowledge of a contravention of the Control Measures/Blasting Plan, the Permit, or the provisions of this bylaw.

- (c) Ground vibration measurements shall be made while blasting, at the closest structure to the blast and at any other structure considered to be sensitive to ground vibrations, as determined by the Engineer. All records pertaining to the safety aspects of the entire rock removal project and its impact on neighbouring properties, including vibration records, Control Measures/Blasting Plan(s) and delay patterns, shall be retained by the Blaster for a period of six years.
- (d) The Engineer shall be present at the first blast that is of the full magnitude specified in the Control Measures/Blasting Plan. During the course of blasting, the Blaster shall forward to the Engineer, all blast records and the Engineer shall review the blast records and confirm to the Director, if requested, that blasting is being carried out in accordance with the Control Measures/Blasting Plan, and shall immediately report any problems, unusual circumstances or inconsistencies to the Director.
- (e) In no circumstances shall ground vibration at any structure exceed a particle velocity of 50 millimetres per second or any lower limit for any given structure specified by the Engineer and made a condition of the Permit. The Blaster will immediately report to the Engineer, and the Engineer shall forthwith report to the Director, any instance when, and under what circumstances, vibrations exceeded the specified maximum limits.

Hours and Conditions

- 8. Blasting shall only be done:
 - (a) on Monday to Friday, not including holidays, and only within the hours permitted under Noise Control Bylaw No. 3908, 1994;
 - (b) when atmospheric or other conditions permit a clear observation at a radius of not less than 100 metres from the place where the blasting is to be carried out.

Notification

- 9.
 - (a) All Affected Owners shall be notified by the Blaster, in writing, prior to blasting. The number of owners to be notified or the area of notification may be increased at the discretion of the Director and once increased, then all subsequent notification of Affected Owners required under this bylaw shall apply to those Owners or the increased area. The notice shall describe the work to be done, the approximate quantity of rock to be

removed, the expected date of commencement, the estimated duration of the project, methods to be used to safeguard persons and property, the warning methods to be used to signal an impending blast, and the name and phone number of the representative of the Blaster or Owner who will provide additional information.

- (b) At least 48 hours notice shall be given of the commencement of any blasting, and at least one week's notice shall be given of any blasting expected to continue for more than two days.
- (c) No blasting shall be done within 300 metres of a School or Hospital until notice as required in 9(a) and 9(b) has also been given to the senior administrator of the School or Hospital, as the case may be, and has been provided to the Director. Further notice must be given to the senior administrator, or his or her designate, at least two hours prior to each actual blast, stating the approximate time of the blast.

Blasting Safety

10.

- (a) The Blaster shall ensure that a security person (equipped with and trained in the use of warning and signalling devices approved by the Workers' Compensation Board) shall be posted at every location where vehicles or pedestrians might be affected by a blast. Prior to any blast, this security person shall signal vehicles and pedestrians to prevent them from entering an area which may be affected by the blast. No blasting shall be done until all persons and vehicles vacate the area affected by the blast.
- (b) Prior to a blast adjacent to a travelled highway, the Blaster shall cause an effective warning to be given (in accordance with the Workers' Compensation Board regulations) in sufficient time to enable persons or vehicles to move to a safe distance from the area that may be affected by the blast. When a blast is completed, the Blaster shall cause the area affected by the blast to be inspected to ensure that it is free of unexploded charges, explosive material or other material which the blasting has caused to be a danger or a potential hazard. When the Blaster's inspection is completed, the security person shall restore normal vehicular and pedestrian traffic as soon as reasonably practicable.
- (c) While blasting is being carried on, the Blaster shall provide at least one competent assistant and as many additional competent assistants as circumstances may require and cause them to warn and implement all reasonable precautions to safeguard the occupants of buildings who may be affected by the blast.

Post Blast Requirements

- 11.
- (a) The Owner shall notify or cause to be notified, the Director and each Affected Owner, in writing, when the blasting to be carried out under the Permit has been completed.
 - (b) At any time within sixty days after the date of notice given under section 11(a), an Affected Owner may give notice to the Owner or the Blaster that the Affected Owner's property has sustained damage as a consequence of the blasting. Upon receipt of such notice, the Owner or the Blaster shall conduct a post-blast survey of the property under the direction of the Engineer. The Affected Owner or an authorized agent shall be given notice of and a reasonable opportunity to be present during the post-blast survey. If the Affected Owner doesn't permit entry to the property within two weeks of the notice being given, or cooperate in the post-blast survey, then it shall be presumed that the Affected Owner's allegation of damage has been satisfied. The Engineer shall complete the post-blast survey without delay and submit a report of the survey to the Director who shall provide copies to the Owner and the Affected Owner.
 - (c) The amount of any loss or damage within the scope of an indemnity under Section 5(c) that remains unpaid to the District six months after the date of the post-blast survey shall be deemed to be a debt due to the District which shall be recovered by the District in the same manner as taxes due on the parcel of land where the blasting was carried out.

Exemption

12. Notwithstanding the provisions hereof:
- (a) Blasting may be exempted by the Director from the provision of Sections 5(g) - (i), 5(k), 7, 9 and 11 of this Bylaw where:
 - (i) less than 10 cubic metres of rock or other material is to be blasted by means of detonating not more than 0.3 kilograms of explosive per delay; or
 - (ii) the rock to be blasted consists entirely of boulders separate from bedrock;
 - (b) Blasting shall be exempt from all provisions of Bylaw:
 - (i) if the blasting is specifically authorized by a statute or regulation other than the *Municipal Act*; or

- (ii) if the blasting is, in the Director's opinion, required on an urgent basis to lessen or eliminate an imminent threat to life, safety, property damage or public transportation routes and communication systems.

Offence

Amended by
Regulatory
Bylaw
Enforcement
and Penalty
Bylaw No.
4521, 2007

- 13. Every person who violates a provision of this bylaw, or who consents, allows or permits an act or thing to be done in violation of a provision of this bylaw, or who neglects or refrains from doing anything required by a provision of this bylaw, is guilty of an offence and is liable, upon summary conviction, to a fine not exceeding \$10,000 and not less than \$5,000, and is guilty of a separate offence each day that a violation continues or exists.
- 14. Council may, by bylaw adopted following a public meeting respecting the matter, suspend or prohibit the application of any section(s) of this bylaw within an area of the District for a period of time specified in such bylaw.
- 15. Nothing in this bylaw limits the application of other bylaws, and in particular, the Soil Removal and Deposit Regulation Bylaw, to the blasting of rock.

Title

- 16. This Bylaw may be cited for all purposes as the "Blasting Bylaw No. 4024, 1996".

Repeal

- 17. "Blasting Bylaw No. 3785, 1992" is repealed.

PASSED by Council on 1996 November 18.

RECONSIDERED AND ADOPTED by Council on 1996 November 25.

MAYOR

MUNICIPAL CLERK

SCHEDULE "A" TO BLASTING BYLAW NO. 4024, 1996

THE CORPORATION OF THE DISTRICT OF WEST VANCOUVER

APPLICATION FOR A BLASTING PERMIT

1. I, _____, of _____
(Print full name of Owner) (address)
am the registered owner of the following lands (phone no.) _____

(street address)

(legal description)
2. I hereby authorize _____
(Print full name of Owner's Agent)
of _____,
(company name) (phone no.)
to act as my agent pursuant to the bylaw.
3. The purpose of the blasting is:
 - a. road and utilities
 - b. house or garage
 - c. driveway or parking area
 - d. utility connections
 - e. power pole
 - f. other (describe)_____
4. Parking area _____ m², width of driveway _____ m.
5. Building footprint of house and garage shown on plan for which building permit applied for: _____ m² less building footprint of previous house and garage _____ m² = net building footprint _____ m².
6. Previous volume of rock removed _____ m³. Remaining rock allowed to be removed based on section 5 above: _____ m³.
7. Volume of rock to be removed within footprint of house and garage and above finished floor slabs elevation as certified by BCLS _____ m³.
8. Estimated total volume of rock to be blasted _____ m³ (include overblast below floor slab surface and outside of foundation walls).
9. Expected date of starting of drilling _____. Estimated duration _____.
10. The fee as required by the bylaw is enclosed.

11. The following documentation is provided in support of this application:
- a) A title search conducted within the last 30 days.
 - b) A copy of a valid blasting certificate issued by the Workers' Compensation Board to the blaster who will undertake the work.
 - c) The indemnity as required by Schedule C of the bylaw.
 - d) A certificate of insurance as required by Schedule D of the bylaw.
 - e) A topographic survey prepared by BCLS or engineer (if required).
 - f) Letters of Assurance in the form of Schedule E of the bylaw.
 - g) A Control Measures/Blasting plan.
 - h) Preblast survey report (including a plan of the area showing the affected parcels and those parcels requiring notification) prepared in compliance with the bylaw.
 - i) A report on noise control as required by the bylaw.
12. The above information is certified to be correct:

(Owner's Agent signature)

(Owner's signature(s) or Authorized Signatory if a Corporation)

SCHEDULE "B" TO BLASTING BYLAW NO. 4024, 1996

**THE CORPORATION OF THE DISTRICT OF WEST VANCOUVER
BLASTING PERMIT**

This permit authorizes the Blaster referred to in the Blasting Certificate provided in relation to the above application to blast at the Owner's property referred to in the above application for a period of fourteen calendar days from the date of issue in accordance with: the provisions of the West Vancouver Blasting Bylaw No. 4024, 1996, Control Measures/Blasting Plan submitted and the recommendations in the Letter of Assurance filed with the Application.

Changes from the specifications referred to in the application are listed below and are part of this Permit:

Permit Approved: _____
Director of Operations

Date of Permit: _____

Extension Approved: _____

Date of Extension: _____

SCHEDULE "C" TO BLASTING BYLAW NO. 4024, 1996

**THE CORPORATION OF THE DISTRICT OF WEST VANCOUVER
BLASTING PERMIT INDEMNITY**

Date: _____

To: The Director of Operations
THE CORPORATION OF THE DISTRICT
OF WEST VANCOUVER
750 - 17th Street
West Vancouver, B.C.
V7V 3T3

Re: _____
Address of Project (print)

Legal Description of Project (print)

The undersigned hereby indemnifies The Corporation of the District of West Vancouver with respect to all actions, causes of actions, claims, demands, costs and expenses (including legal fees) arising from or in any way connected to the activities on the above referenced property for which a blasting permit is applied for pursuant to Blasting Permit Bylaw No. 4024, 1996 or any acts or omissions of the blaster, the undersigned agent or their employees and agents relating thereto.

Owner's Name (print)

Owner's signature (If owner is a corporation
the signature of a signing officer must be
given here.)

Owner's Agent signature

SCHEDULE "D" TO BLASTING BYLAW NO. 4024, 1996

INSURANCE REQUIREMENTS

Insurance

The Owner shall provide to the Director of Operations with a certificate of insurance to insure damage to persons or property that may be injured by the blasting. This insurance shall be public liability and property damage insurance in a form satisfactory to the Municipal Solicitor, with Five Million Dollars (\$5,000,000) coverage inclusive for loss or damage in respect of injury or death of any person or person and/or damage to property from any one accident or occurrence. There shall be no third party deductible for bodily injury or property damage loss and no space warranty clause. The District, the Director of Operations, any engineer hired as a consultant by the District in relation to a particular application, and the company employing the holder of the blasting certificate shall be named insureds. Notification will be given by the insurer to the Director of Operations by registered mail not less than 30 days prior to material change, cancellation or termination of the insurance.

SCHEDULE "E" TO BLASTING BYLAW NO. 4024, 1996

LETTERS OF ASSURANCE

**CONFIRMATION OF COMMITMENT BY OWNER
AND BY ENGINEER**

Re: Verification of Control Measures/Blasting Plan and Monitoring of Blasting by a Registered Professional

To: The Director of Operations
THE CORPORATION OF THE DISTRICT
OF WEST VANCOUVER
750 17th Street
West Vancouver, B.C.
V7V 3T3

Date: _____

Dear Sir:

Re: _____
Address of Project (print)

Legal Description of Project (print)

The undersigned Owner has retained _____ as an Engineer to review a Control Measures/Blasting Plan and to monitor the blasting as required by Blasting Bylaw No. 4024, 1996 (the "Bylaw").

The Owner and the Engineer have read the Bylaw. The Owner and the Engineer acknowledge their responsibility to each notify the Director of Operations if the Engineer ceases to be retained by the Owner either before the date the Engineer ceases to be retained or, if that is not possible, then as soon possible.

The Owner and the Engineer understand that where the registered professional ceases to be retained at any time during construction, work on the above project will cease until such time as

- a) a new registered professional is retained, and
- b) a new letter in the form set out in Schedule E to the Bylaw is filed with the Director of Operations.

The Engineer hereby gives assurance that the Control Measures/Blasting Plan reviewed by this registered professional in support of the application for the blasting permit substantially complies with the Blasting Bylaw and other applicable enactment's respecting safety and meets all reasonable criteria for safety of life and property and will provide the further written assurance required by section 5(h) of the Blasting Bylaw.

The Engineer hereby undertakes to be responsible for field reviews of the blasting as required in the Blasting Bylaw.

The Engineer also undertakes to notify the Director of Operations in writing as soon as possible if the Engineer's contract for field review is terminated at any time.

The undersigned Engineer certifies that he or she is licensed to practice as a professional engineer under the Engineers and Geoscientists Act and is specialized in rock mechanics.

Registered Professional

Owner

Registered Professional's Name (print)

Owner's Name (print)

Registered Professional's Signature

Owner's or Owner's appointed agent's signature. (If owner is a corporation the signature of a signing officer must be given here.)

Address (print)

(affix Registered Professional's Seal here)

(If the Registered Professional is a member of a firm, complete the following.)

I am a member of the firm _____
and I sign this letter on behalf of the firm. (print name of firm)

SCHEDULE "F" TO BLASTING BYLAW NO. 4024, 1996

FEE SCHEDULE

The fees that apply are as follows:

1. where the Director permits exemption in accordance with Section 12(a)... \$ 60.00
2. except where i) applies, for blasting <math> < 50^3 </math> rock and it is not for construction of a building..... \$100.00
3. in all other cases: \$500.00

**Repealed by
Fees and Charges
Bylaw 4414, 2004**