



City of Richmond

Report to Committee

To: General Purposes Committee
From: Phyllis L. Carlyle
General Manager, Law & Community Safety
Re: Noise and Sound Regulation

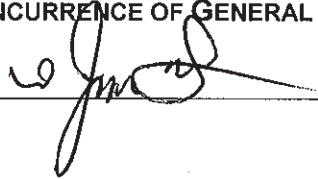
Date: March 21, 2011

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Staff Recommendation

1. "The Point of Reception" definition in the draft proposed Noise Regulation Bylaw attached to this report be approved;
2. The public participation process described in this report be endorsed; and
3. The draft proposed Noise Regulation Bylaw attached to this report, together with such amendments directed by Committee, be used as the basis for the public participation program described in this report.

for Phyllis L. Carlyle
General Manager, Law & Community Safety
(604.276.4104)

FOR ORIGINATING DEPARTMENT USE ONLY			
ROUTED TO:		CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Communications	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Budgets	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Enterprise Services	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Communications	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Engineering	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Roads and Construction	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Fire Rescue	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Law	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
RCMP	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Parks Maintenance and Operations	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Parks Programs	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Building Approvals	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Development Applications	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Policy Planning	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
Transportation	Y	<input checked="" type="checkbox"/> N <input type="checkbox"/>	
REVIEWED BY TAG		YES <input checked="" type="checkbox"/> <i>W</i> NO <input type="checkbox"/>	REVIEWED BY CAO <i>GLD</i> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

Staff Report

Origin

At the General Purposes Committee meeting of February 7, 2011, the following motion was carried:

That the proposed Noise Regulation Bylaw public participation program described in the staff report entitled "Noise and Sound Regulation", dated February 2, 2011, from the General Manager, Law & Community Safety, be referred back to staff to address and provide further information on:

- (1) the possibility of adding a right of appeal to allow a grieved party to appeal to Council regarding an exemption that has been granted under the Noise Regulation Bylaw;*
- (2) the rationale for establishing a 2:00 a.m. prohibition for amplified music and options for an earlier time limit;*
- (3) changing the map attached to the proposed Noise Regulation Bylaw as Schedule "A" - Noise Zone Map, to a chart;*
- (4) including dBC measurements for Activity Zones;*
- (5) the exemptions for the School Board and the City listed under Section 4.1.1 of the proposed Noise Regulation Bylaw be clarified;*
- (6) consultation with residents in the Caithcart and Andrews Road areas;*
- (7) the definitions of "point of reception" when measuring sound;*
- (8) the rationale as to why the daytime hours were extended from the current bylaw;*
- (9) the rationale for the sound levels of continuous sounds and generally for dBA and dBC; and*
- (10) a review of the zones as specified and their interaction.*

Prior to the question on the motion being called, the Chair clarified that staff would be reporting back to Committee on the referral prior to undertaking the public participation process, which would specifically include consultation with the residents in both the Caithcart and Andrews Road.

Analysis

In this report, the term "Current Bylaw" refers to Subdivision Three (Noise Regulation) of the Public Health Protection Bylaw (6989) and "Proposed Bylaw" refers to draft Proposed Noise Regulation Bylaw which is **Attachment 1** to this report.

While there are a number of specific differences between the Current Bylaw and the Proposed Bylaw (a chart comparing the Current Bylaw and the Proposed Bylaw together with the Vancouver and Victoria noise bylaws is **Attachment 2** to this report) the Current Bylaw and the Proposed Bylaw are similar in that each includes the following basic components:

- objective or measurable sound limits (measured by a sound meter)
- subjective (non-measurable) noise standards

- prohibited noise (specific examples of noise that, measured or non-measured, breach the bylaw)
- exemptions from the bylaw

Each of the Current Bylaw and the Proposed Bylaw are drafted to reflect the fact that there are many locations in the City where residential land uses are located either adjacent to or near non-residential land uses. While, in some cases, such proximity results from the fact that the area or neighbourhood may be in transition, in most cases, such proximity is anticipated by the City's Official Community Plan ("OCP"). Typical adjacencies in the OCP include residential / agricultural, residential / commercial and residential / industrial. Differing land uses have differing sound or noise consequences and balancing the same is a central objective of the Proposed Bylaw.

A key difference between the Current Bylaw and the Proposed Bylaw is how the objective / measurable standards interact with the subjective standards. In the Current Bylaw, the objective / measurable standards and the subjective are alternative prohibitions. For example, in the Current Bylaw, even if a sound can be measured and found within the permitted objective / measurable range, the same sound could be in contravention of the subjective prohibition.

Staff have reviewed this interaction and drafted the Proposed Bylaw so that the subjective standard would be applicable only in circumstances when it is impractical to measure the sound. Staff believe that this change gives better clarity and certainty as to the level of sound permitted in and between each zone. Further, in making this change, staff have considered other jurisdictions (Victoria for example) and considered the law in this respect. Finally, staff note that the concept of prohibited types of noise is retained in the Proposed Bylaw; given the same, even if the items listed as "Prohibited Types of Noise" (barking dogs, non-muffled engines, vehicle horns, etc) could be measured and found to be within the objective / measurable limits, such noises would, as in the Current Bylaw, contravene the Proposed Bylaw.

Staff provide the following responses and further information in respect to the ten (10) referral items:

1. The possibility of adding a right of appeal to allow aggrieved party to appeal to Council regarding an exemption that has been granted under the Noise Regulation Bylaw;

In a thorough review of the timing and the number of instances involved in the present process for approving exemptions to the noise regulations, staff have determined that any proposed publishing of such exemption approvals in local newspapers and allowing a period of time to appeal to Council is just not practical. In many cases, there are situations such as weather, allocation of resources and project deadlines which require City staff to respond to such requests within a two or three day window. If staff receive significant complaints of noise generated under an exemption, then the exemption is typically revised or revoked. Staff will be working with developers and general contractors starting with the development application process to ensure that potential noise is kept to a minimum, all parties are aware of the prohibitions and local residents are kept thoroughly informed by the contractor throughout the project.

2. The rationale for establishing a 2:00 a.m. prohibition for amplified music and options for an earlier time limit;

Section 3.1.2.1.(f) of the Current Bylaw declares that “sound made by amplified music, whether pre-recorded or live, after 2:00 a.m. and before 8:00 a.m. on any day” to be “objectionable” notwithstanding that the such noise may not contravene other parts of the Current Bylaw. This prohibition found its way into the Current Bylaw, when, in March 2000, the Current Bylaw replaced its predecessor, the 1989 Noise Control Bylaw 5401. Previously the 1989 Noise Control Bylaw 5401 was, on June 22, 1998, amended to include the 2:00 a.m. to 8:00 a.m. prohibition. The May 17, 1998 staff report that accompanied the amendment bylaw notes “Rave parties” as being the rationale for the amendment.

The 2:00 a.m. to 8:00 a.m. prohibition functions in the Proposed Bylaw in the same way as it functions in the Current Bylaw. The Current Bylaw provides that even if “sound made by amplified music, whether pre-recorded or live, after 2:00 a.m. and before 8:00 a.m. on any day . . . may not constitute a violation of the objective / measurable provisions of the Current Bylaw, it is, all the same, “objectionable” and therefore a breach of the Current Bylaw. Section 3.2.1(e) of the Proposed Bylaw states that “sound made by amplified music, whether pre-recorded or live, after 2:00 a.m. and before 8:00 a.m. on any day” is specifically “prohibited.” Further, the 2:00 a.m. prohibition is a specific prohibition and not exclusive; therefore “sound made by amplified . . .” at other times (before 2:00 a.m.) may be caught by the objective / measurable standards in Part 2 of the Proposed Bylaw.

3. Changing the map attached to the proposed Noise Regulation Bylaw as Schedule “A” - Noise Zone Map, to a chart;

Staff have amended the Proposed Bylaw to replace the map with a chart to identify the Proposed Bylaw’s three sound zones. The three zones roughly correspond to the land uses identified in the Richmond Zoning Bylaw 8500. Comprehensive (CD) zones are notionally organised in Richmond Zoning Bylaw 8500 according to the principal use and have been categorised in the chart accordingly. Land Use Contract areas are added to the chart and categorised by principal use.

A map will be retained as a visual resource and accessible via the City web-site. The map will be up-dated periodically as rezoning occurs. In the event of a difference between the map and the Bylaw, the Bylaw will prevail.

4. Including dBC measurements for Activity Zones;

The Proposed Bylaw has been amended to include dBC restrictions for sound from an Activity Zone to a Quiet Zone and to an Intermediate Zone. The dBC levels are 10 decibels greater than the corresponding dBA levels. The dBC limits are 10 decibels greater than the dBA levels because typical sound sources which are better measured on the dBC scale (such as heat pumps, air conditioners, hammering, human voices) typically have a dBC-to-dBA difference of approximately 10 decibels.

5. The exemptions for the School Board and the City listed under Section 4.1.1 of the proposed Noise Regulation Bylaw be clarified;

The exemptions have been amended to make it clear that the activities exempted are authorised activities on the City or School Board property, as the case may be.

6. Consultation with residents in the Caithcart and Andrews Road areas;

The following program, as outlined in the February 7th report, has been amended to include targeted public participation with residents and businesses in the Caithcart Road / St. Edwards Drive and No 2 Road / Andrews Road neighbourhoods.

Community Bylaws staff will be working with Corporate Communications and key City departments:

1. to conduct a thorough public notice, education and input assessment including the following components:
 - published notices in the local media;
 - an educational open house and on-line reference resources to ensure that changes in technology, generally accepted community standards, amendments in the Proposed Bylaw and challenges in enforcement are outlined;
 - targeted public participation with residents and businesses in the Caithcart Road / St. Edwards Drive and No 2 Road / Andrews Road neighbourhoods including test measurements and point-of-reception demonstrations based on the parameters set-out in the Proposed Bylaw; and
 - in order to expand the scope of the education and to gauge the public's sensitivity and opinions, an on-line survey through the City's web site.
2. to conduct a thorough public participation process with the business community including the following components:
 - a workshop with key business stakeholders in the community, including the Richmond Economic Advisory Committee, Richmond Chamber of Commerce, etc. to investigate impacts of the Proposed Bylaw;
 - identification of businesses that would potentially be rendered non-compliant if the Proposed Bylaw is adopted (i.e. GIS property map scan to identify potential noise conflict areas); outreach and consultation with businesses in potential noise conflict areas will be required to develop a mitigation strategy during implementation; and
 - concurrent to the public consultation process, staff develop a mitigation strategy for existing businesses that may be impacted by the Proposed Bylaw, if adopted.

Based on this dual-pronged public participation program, a full report would be provided to Council with recommendations and any further amendments to the Proposed Bylaw, impact on the City's enforcement program agreements and any cost implications.

7. The definitions of "point of reception" when measuring sound;

For quick reference, the definition of "Point of Reception" in the Proposed Bylaw is as follows:

"point of reception" means a position within the property line of the real property occupied by the recipient of a **sound** that best represents the location at which that **specific sound**, emanating from another property, is received and the resulting disturbance experienced and is:

- (a) at least 1.2 m from the surface of the ground and any other **sound** reflecting surface; and

- (b) outdoors, unless there is no **point of reception** outdoors because the **specific sound** is within the same building or the wall of one **premises** is flush against another, in which case the **point of reception** shall be within the building where the **specific sound** is received and the resulting disturbance experienced;

Staff have reviewed and set-out for comparison in the table below, the definition of “Point of Reception” in the Current Bylaw and two other jurisdictions – Victoria and Vancouver.

Jurisdiction	Definition / Location
Richmond Current Bylaw	<ul style="list-style-type: none"> • where sound is received (outside the source property); or • any place on a strata lot
Victoria	<ul style="list-style-type: none"> • property line; or • position within property line that best represents the location at which the sound is received and the resulting disturbance experienced
Vancouver	<ul style="list-style-type: none"> • property line

Having considered other jurisdictions and sought further input from our consultants, staff are of the view that as it best represents the nuisance (both in the general sense and the legal sense) that may be caused by the sound, that the definition of “point of reception” in the Proposed Bylaw should be retained. A flow chart entitled “Richmond Noise Regulation Bylaw Rationale for Noise Zones & Point of Reception” setting-out the rationale for such retention is **Attachment 3** to this report.

8. The rational as to why the daytime hours were extended from the Current Bylaw;

The table below sets-out the definition of daytime in the Current and Proposed Bylaw

Bylaw	Definition of “Daytime”
Current	<ul style="list-style-type: none"> • 7:00 a.m. to 8:00 p.m. in the same day
Proposed	<ul style="list-style-type: none"> • 7:00 a.m. to 10:00 p.m. Monday through Saturday • 10:00 a.m. to 10:00 p.m. on Sunday and holiday

The weekday daytime hours in the Proposed Bylaw were initially extended to match the definitions in Vancouver, Burnaby, New Westminster, Port Moody, Langley Township and Victoria bylaws. The City and District of North Vancouver use the Current Bylaw’s 7:00 a.m. to 8:00 p.m. definition. Staff have reconsidered the definition and amended the Proposed Bylaw as follows:

Amended Proposed Bylaw	<ul style="list-style-type: none"> • 7:00 a.m. to 8:00 p.m. Monday through Saturday • 10:00 a.m. to 8:00 p.m. on Sunday and holiday
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9. The rationale for the sound levels of continuous sounds and generally for dBA and dBC; and

Continuous sound is sound over a period of time. The Proposed Bylaw replaces “continuous sound” with the ‘L_{eq}’ measurement. ‘L_{eq}’ measures all of the sound energy within the measurement time interval. Staff have chosen the latter metric because:

1. ‘L_{eq}’ can be measured on-site by a sound meter whereas the current definition may require a calculation that can not be made on site.
2. ‘L_{eq}’ is the most commonly used metric to quantify sound.
3. ‘L_{eq}’, as it measures all sound energy over the measurement period, it is the metric which best correlates with human annoyance or disturbance from noise.

Objective or measurable standards are designed to give certainty as to permitted levels of sound. The Current Bylaw includes dBA standards as do many modern noise bylaws (Victoria and Vancouver are examples).

The dBA scale (which is in the Current Bylaw) is the most common frequency weighting of sound. The dBC scale (which is not in the Current Bylaw but is in the Vancouver and Victoria bylaws) better measures lower frequency / bass sound.

10. A review of the zones as specified and their interaction.

The residual or background sound level varies throughout the City mainly due to residential use, transportation modes, outdoor activity, commercial activity and industrial noise. Three sound zones are used (the Current Bylaw has only two zones) to approximate these variances and strike a balance between accuracy, practicality and the impact of adjacencies between different uses. There is too large of a difference in the residual or background sound levels between the relatively quiet residential areas and sometimes relatively noisy areas of the City to simply retain the Current Bylaw’s two noise zones. Comparatively, Vancouver and Burnaby have three noise zones while Victoria, has, due to its unique harbour district, added a fourth.

Each designation from the City’s Zoning Bylaw 8500 was, based on use, sorted to the most representative of the Proposed Bylaw’s three noise zones. As further fine tuning for the ambient or background sound, staff has also included a designation for roadways and highways within the City’s boundaries and a consideration of the potential impact of aircraft noise for specific properties located east of the airport and considered in the City’s OCP.

Enforcement Approach and Resources

In respect to the Proposed Bylaw, there has been regular consultation with Richmond Health; the City’s contractor for enforcement of the Current Bylaw. Richmond Health has provided input as to the challenges in enforcement of the Current Bylaw and the potential operational and cost impacts of enforcing the Proposed Bylaw including new equipment, training and increased complaint levels.

It is expected that the clear objective measurements will provide clear limitations for all parties involved and the subjective option, when the objective approach is not viable, will address many other noise complaints.

City staff will also be including the fine structure and dispute process within the City's Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122. This will create a clear indication of the potential fines that may be levied and provide a transparent and convenient forum for the dispute of any violation notices issued.

Financial Impact

Sound and noise regulation is an extremely complicated area that requires the extensive assistance of legal and acoustic consultants. Proposed changes in sound / noise measurement and enforcement standards will result in the need to conduct extensive public participation, replace sound measurement equipment, train staff and produce comprehensive documentation.

The cost allocation is as follows:

Outside Counsel and Consultants	\$60,000
Replacement Equipment	\$20,000
Training	\$15,000
Documentation	<u>\$5,000</u>
	\$100,000

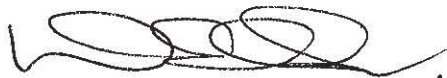
Staff recommend that this request be considered as a one-time expenditure request from the 2010 operating surplus.

Based on an assessment from Richmond Health, the City's contractor for enforcement of noise regulations, the existing annual contract cost of \$65,000 for noise regulations will remain for 2011; out of their total contract cost with the City of \$209,000. However, Richmond Health advises a 60% increase in noise complaints over the past 2 years and accordingly Richmond Health will have to wait until later in 2011 to assess the final impact on any contract costs for 2012 and beyond.

It is expected that the Proposed Bylaw may result in a small number of additional prosecutions at an average cost of \$15,000 to \$20,000 per prosecution.

Conclusion

The ten (10) referral items from the February 27, 2011 General Purposed meeting are hereby addressed and an amended Proposed Bylaw is attached to this report.



Wayne G. Mercer
Manager, Community Bylaws
(604.247.4601)

WGM:wgm



NOISE REGULATION BYLAW

The Council of the City of Richmond enacts as follows:

PART ONE: INTRODUCTION

1.1 Title

1.1.1 This Bylaw may be cited as the “Noise Regulation Bylaw No. _____”.

1.1.2 Definitions

In this Bylaw,

“**Activity Zone**” means those areas so described in this Bylaw and so indicated in Schedule A, attached to and forming part of this Bylaw;

“**approved sound meter**” means an acoustic instrumentation system which:

- (a) is comprised of a microphone, wind screen and recorder which conforms to class 1 or class 2 requirements for an integrating sound level meter as defined by IEC 61672-1 [2002];
- (b) has been field calibrated before and after each sound measurement using a class 1 or class 2 field calibrator as defined by IEC 60942 [2003]; and
- (c) has been calibrated, along with the field calibrator, within the past two years by an accredited lab to a traceable national institute standard;

“**City**” means the City of Richmond;

“**construction**” includes:

- (a) the erection, alteration, repair, relocation, dismantling, demolition and removal of a building or structure;
- (b) structural maintenance, power-washing, painting, land clearing, earth moving, grading, excavating, the laying of pipe and conduit (whether above or below ground), street or road building and repair, concrete placement, and the installation, or removal of **construction** equipment, components and materials in any form or for any purpose; or

- (c) any work or activities being done or conducted in connection with any of the work listed in paragraphs (a) or (b);

“Council” means the City Council of Richmond;

“daytime” means:

- (a) from 7:00 a.m. to 8:00 p.m. Monday through Saturday;
- (b) from 10:00 a.m. to 8:00 p.m. on a Sunday or **holiday**;

“dBA”, or A-weighted decibel, means the unit used to measure the sound pressure level using the “A” weighting network setting on an **approved sound meter**;

“dBC”, or C-weighted decibel, means the unit used to measure the sound pressure level using the “C” weighting network setting on an **approved sound meter**;

“holiday” means:

- (a) New Years Day, Good Friday, Easter Monday, Victoria Day, Canada Day, British Columbia Day, Labour Day, Thanksgiving Day, Remembrance Day, Christmas Day and Boxing Day; and
- (b) the day named in lieu of a day that is named in paragraph (a) and that falls on a Saturday, Sunday or the following Monday;

“IEC” means the International Electro-Technical Commission;

“impulsive sound” means **specific sound** that is characterized by brief bursts of sound pressure, with the duration of each impulse usually less than 1 second, including without limitation specific sound containing “bangs”, “clicks”, “clatters” or “thumps” from hammering, banging of doors and metal impacts;

“impulsive sound adjustment” means a 5 **dBA** increase applied to **specific sound** classified as **impulsive sound** and a 0 **dBA** increase applied to **specific sound** that is not classified as **impulsive sound**;

“inspector” includes the **Medical Health Officer**, the Chief Public Health Inspector, the General Manager of Engineering and Public Works, a Bylaw Enforcement Officer employed by the **City**, a Peace Officer, and any employee acting under the supervision of any of them;

“Intermediate Zone” means those areas so described in this Bylaw and so indicated in schedule A, attached to and forming part of this Bylaw;

“ISO” means the International Organization for Standardization;

“**L_{eq}**”, or equivalent continuous sound pressure level, means that constant or steady **sound** level, rounded to the nearest decibel, which, in a specified time period, conveys the same **sound** energy as does the actual time-varying sound level;

“**lawn and garden power equipment**” means any equipment or machinery used in lawn and garden care, including leaf blowers, edge trimmers, rototillers and lawn mowers;

“**measurement time interval**” means the total time over which **sound** measurements are taken, and:

- (a) is chosen to best represent the situation causing disturbance;
- (b) is between 1 minute and 30 minutes;
- (c) is chosen to avoid influence from the **residual sound** where possible; and
- (d) may consist of a number of non-contiguous, short term measurement time intervals that add up to 1 to 30 minutes;

“**Medical Health Officer**” means the Medical Health Officer appointed under the *Health Authorities Act*, RSBC 1996, c. 180 or his/her designate, to act within the limits of the jurisdiction of any local board, or within any health district;

“**nighttime**” means any period of any day not specifically defined as **daytime**.

“**point of reception**” means a position within the property line of the real property occupied by the recipient of a **sound** that best represents the location at which that **specific sound**, emanating from another property, is received and the resulting disturbance experienced and is:

- (a) at least 1.2 m from the surface of the ground and any other sound reflecting surface; and
- (b) outdoors, unless there is no **point of reception** outdoors because the **specific sound** is within the same building or the wall of one **premises** is flush against another, in which case the **point of reception** shall be within the building where the **specific sound** is received and the resulting disturbance experienced;

“**premises**” means:

- (a) the area contained within the boundaries of a legal parcel of land and any building situated within those boundaries; and
- (b) each unit, the common areas of the building, and the land within the apparent boundaries of the legal parcel of land are each separate **premises** where a building contains more than one unit of commercial, industrial or **residential occupancy**;

“Quiet Zone” means those areas so described in this Bylaw and so indicated in Schedule A, attached to and forming part of this Bylaw;

“rating level” means the **specific sound level** plus the **impulsive sound adjustment** and **tonal sound adjustment**;

“residential occupancy” in respect of **premises**, means a dwelling unit located within a building, and includes a room for rent in a hotel or motel;

“residual sound” means the sound remaining at a given location in a given situation when the **specific sound** source is suppressed to a degree such that it does not contribute to the **total sound**;

“sound” means an oscillation in pressure in air which can produce the sensation of hearing when incident upon the ear;

“specific sound” means the **sound** under investigation;

“specific sound level” means the equivalent continuous **sound** pressure level or L_{eq} at the point of reception produced by the **specific sound** over the **measurement time interval**;

“tonal sound” means **specific sound** which contains one or more distinguishable, discrete, continuous tones or notes including, without limitation, **specific sound** characterized by a “whine”, “hiss”, “screech” or “hum”;

“tonal sound adjustment” means a 5 dBA increase applied to **specific sound** classified as **tonal sound** and a 0 dBA increase applied to **specific sound** that is not classified as **tonal sound**, or, if there is uncertainty whether a **specific sound** is tonal, a 0-6 dBA increase as determined using the fast Fourier transform (FFT) analysis approach described in ISO 1996-2 [2007] Annex C;

“total sound” means the totally encompassing **sound** in a given situation at a given time, usually composed of **sound** from many sources near and far;

“total sound level” means the equivalent continuous **sound** pressure level or L_{eq} at the point of reception produced by the **total sound** over the **measurement time interval**; and

“vehicle” means a device in, on or by which a person or thing is or may be transported or drawn along a highway, but does not include a device designed to be moved by human power or device used exclusively on stationary rails or tracks.

PART TWO: SOUND LEVELS

2.1 Quiet Zone Permitted Sound Levels

- 2.1.1 In a **Quiet Zone** a person must not make, cause or permit to be made or caused, any **sound** that has a **rating level** which:

- (a) during the **daytime** exceeds:
 - (i) 55 **dB**A or 65 **dB**C when received at a **point of reception** in a **Quiet Zone**;
 - (ii) 60 **dB**A or 70 **dB**C when received at a **point of reception** in an **Intermediate Zone**;
 - (iii) 70 **dB**A or 80 **dB**C when received at a **point of reception** in an **Activity Zone**; or
- (b) during the **nighttime** exceeds:
 - (i) 45 **dB**A or 55 **dB**C when received at a point of reception in a **Quiet Zone**;
 - (ii) 50 **dB**A or 60 **dB**C when received at a **point of reception** in an **Intermediate Zone**;
 - (iii) 70 **dB**A or 80 **dB**C when received at a **point of reception** in an **Activity Zone**.

2.2 Intermediate Zone Permitted Sound Levels

2.2.1 In an **Intermediate Zone** a person must not make, cause or permit to be made or caused, any **sound** that has a **rating level** which:

- (a) during the **daytime** exceeds:
 - (i) 60 **dB**A or 70 **dB**C when received at a **point of reception** in a **Quiet Zone**;
 - (ii) 60 **dB**A or 70 **dB**C when received at a **point of reception** in an **Intermediate Zone**;
 - (iii) 70 **dB**A or 80 **dB**C when received at a **point of reception** in an **Activity Zone**; or
- (b) during the **nighttime** exceeds:
 - (i) 50 **dB**A or 60 **dB**C when received at a **point of reception** in a **Quiet Zone**;
 - (ii) 50 **dB**A or 60 **dB**C when the prescribed **point of reception** is outdoors or 55 **dB**C when the prescribed **point of reception** is indoors in an **Intermediate Zone**;

- (iii) 70 dBA or 80 dBC when received at a **point of reception** in an **Activity Zone**.

2.3 Activity Zone Permitted Sound levels

2.3.1 In an **Activity Zone** a person must not make, cause or permit to be made or caused, any **sound** that has a **rating level** which:

- (a) during the **daytime** exceeds:
 - (i) 60 dBA or 70 dBC when received at a **point of reception** in a **Quiet Zone**;
 - (ii) 65 dBA or 75 dBC when received at a **point of reception** in an **Intermediate Zone**;
 - (iii) 70 dBA or 80 dBC when received at a **point of reception** in an **Activity Zone**; or
- (b) during the **nighttime** exceeds:
 - (i) 50 dBA or 60 dBC when received at a **point of reception** in a **Quiet Zone**;
 - (ii) 55 dBA or 65 dBC when received at a **point of reception** in an **Intermediate Zone**;
 - (iii) 70 dBA or 80 dBC when received at a **point of reception** in an **Activity Zone**.

2.4 Summary of Permitted Sound Levels by Zone

2.4.1 For convenience, the outdoor **sound** level limits set out in sections 2.1 to 2.3 are summarized in the table in Schedule B, attached to and forming part of this Bylaw.

2.5 Assessment at Locations Affected by Residual Sound

2.5.1 Where the **total sound level** exceeds all of the prescribed **sound** limits identified in sections 2.1 to 2.3 and is influenced by the **residual sound** at the **point of reception**, such that the **specific sound** cannot be accurately measured, the **specific sound** should be measured at close distances and then predicted at the **point of reception** using an international calculation standard such as ISO 9613-2.

2.6 Role of Inspector

2.6.1 Any **inspector** may measure **sound** levels with an **approved sound meter**, and may enter at all reasonable times upon any real property, to determine compliance with the provisions of Part Two of this Bylaw.

PART THREE: PROHIBITED TYPES OF NOISE

3.1 Noise Disturbing Neighbourhood

3.1.1 Subject to other provisions of this Bylaw:

- (a) a person must not make or cause a **sound** in a street, park, plaza or similar public place which disturbs or tends to disturb the quiet, peace, rest, enjoyment, comfort or convenience of persons in the neighbourhood or vicinity;
- (b) a person who is the owner or occupier of, or is in possession or control of, real property must not make, suffer, or permit any other person to make, a **sound**, on that real property, which can be easily heard by a person not on the same **premises** and which disturbs or tends to disturb the quiet, peace, rest, enjoyment, comfort or convenience of persons in the neighbourhood or vicinity.

3.1.2 Subsection (3.1.1) does not apply if a **sound** level may practically be measured and the **sound** level is in compliance with Part Two of this Bylaw.

3.2 Prohibited Types of Noise

3.2.1 The following sounds are prohibited because they are objectionable, or liable to disturb the quiet, peace, rest, enjoyment and comfort of individuals or the public notwithstanding that such sounds may not constitute a violation of any other provision of this Bylaw:

- (a) the **sound** made by a dog barking, howling or creating any kind of **sound** continually or sporadically or erratically for any period in excess of one-half hour of time;
- (b) the **sound** made by a combustion engine that is operated without using an effective exhaust muffling system in good working order;
- (c) the **sound** made by a **vehicle** or a **vehicle** with a trailer resulting in banging, clanking, squealing or other like **sounds** due to an improperly secured load or improperly secured equipment, or due to inadequate maintenance;
- (d) the **sound** made by a **vehicle** horn or other warning device used except under circumstances required or authorized by law;
- (e) the **sound** made by amplified music, whether pre-recorded or live, after 2:00 a.m. and before 8:00 a.m. on any day; and
- (f) **sound** produced by audio advertising which:
 - (i) is directed at pedestrians or motorists on any street or sidewalk; or

- (ii) can be heard on any street or sidewalk.

PART FOUR: EXEMPTIONS

4.1 Specific Exemptions

4.1.1 This Bylaw does not apply to **sound** made by:

- (a) a police, fire, ambulance or other emergency vehicle;
- (b) a horn or other signalling device on any **vehicle**, boat or train where such sounding is properly and necessarily used as a danger or warning signal;
- (c) the use, in a reasonable manner, of an apparatus or mechanism for the amplification of the human voice or music in a public park, public facility or square in connection with a public meeting, public celebration, athletic or sports event or other public gathering, if:
 - (i) that gathering is held under a City issued permit or license or similar agreement; or
 - (ii) that gathering has received prior approval under section 4.2.1;
- (d) bells, gongs or chimes by religious institutions, or the use of carillons, where such bells, gongs, chimes or carillons have been lawfully erected;
- (e) works and activities authorized by the British Columbia School Board 38 (Richmond) and conducted by its employees, agents and contractors on property owned or operated by British Columbia School Board 38 (Richmond);
- (f) a parade, procession, performance, concert, ceremony, event, gathering or meeting in or on a street or public space, provided that an exemption has been granted for the event;
- (g) outdoor athletic activity that takes place between 8:00 a.m. and 10:30 p.m.;
- (h) the use, in a reasonable manner, of the **premises** of a Community Care Facility duly licensed under the *Community Care and Assisted Living Act*, SBC, 2002, Chapter. 75, or from the use of a similar institution;
- (i) works and activities authorized by the City and conducted by its employees, agents and contractors on property owned (including, without limitation dedicated roads, parks and other public spaces) or operated by the City;
- (j) a garbage collection service:
 - (i) between 7:00 a.m. and 8:00 p.m. Monday through Saturday; and

- (ii) between 9:00 a.m. and 6:00 p.m. on a Sunday or **holiday**;
- (k) municipal works including, but not limited to, the construction and repair of streets, sewers lighting and other municipal services, whether carried out during the daytime or during the nighttime by, or on behalf of the City or the Greater Vancouver Regional District or any other public authority, but, unless the General Manager of Engineering and Public Works approves otherwise, does not include **construction** carried out under and agreement to install City works as described in section 940 of the *Local Government Act*;
- (l) **lawn and garden power equipment**, provided that the use of the **lawn and garden power equipment** takes place:
 - (i) between 7:00 a.m. and 8:00 p.m. Monday through Friday; or
 - (ii) between 10:00 a.m. and 8:00 p.m. on a Saturday, Sunday and **holiday**;
- (m) **construction**, provided that it has a **rating level** which does not exceed 85 **dBA** when measured at a distance of 15.2m (50 feet) from that source of **sound**, and only:
 - (i) between 7:00 a.m. and 7:00 p.m. Monday through Friday that is not a **holiday**; and
 - (ii) between 10:00 a.m. and 6:00 p.m. on a Saturday that is not a **holiday**;
- (n) the nightly cleaning of streets and sidewalks and the collection of garbage from sidewalk refuse bins by or on behalf of the City;
- (o) public transit or aeronautics;
- (p) normal farm practices on a farm operation as defined by and protected by the *Farm Practices Protection (Right to Farm) Act*; and
- (q) an occupant of a strata unit or a rental unit where the **point of reception** is within the same building.

4.2 Exemptions by Approval

- 4.2.1 A person may submit an application for an exemption from the provisions of this Bylaw to the General Manager of Engineering and Public Works or his or her designate.
- 4.2.2 With respect to exemptions from the limitations imposed by section 4.1.1(m) of this Bylaw for construction projects, the General Manager of Engineering and Public Works or his or her designate may grant the exemption if satisfied that:

- (a) the volume of traffic in the area of the proposed construction is such as to cause danger to the workers on the job, or to cause traffic congestion;
- (b) the impact and inconvenience to residents in the area of the proposed construction can be minimised;
- (c) the construction cannot be undertaken efficiently or safely during the normal working day; or
- (d) interruption of any service during normal working day would cause any person undue hardship.

4.2.3 If an exemption is granted by the General Manager of Engineering and Public Works, or his or her designate, the applicant must, at least forty-eight (48) hours before the start of the exemption period, distribute a notice, in a form and with content satisfactory to the General Manager of Engineering and Public Works or his or her designate, to all residences within a one hundred (100) metre radius. Such a notice is to include, but will not be limited to, all times and dates, the specific location, general description of the activity and a designated 24-hour contact phone number for the applicant.

4.2.4 An applicant affected by a decision of the General Manager of Engineering and Public Works or his or her designate made pursuant to section 4 of this Bylaw may apply to have Council reconsider that decision in accordance with the following procedures:

- (a) the applicant for the exemption may apply by notice to the City Clerk within 14 days of any refusal by the General Manager of Engineering and Public Works or his or her designate to grant an exemption;
- (b) an applicant for the exemption may address Council in writing or in person concerning the specific exemption or any future exemptions; and
- (c) Council may allow or revise the specific exemption, if time permits, or prescribe conditions for any future exemptions.

PART FIVE: GENERAL

5.1 Severability

5.1.1 No provision of this Bylaw depends for its validity on the validity of any other provision.

5.2 Offences and Penalties

- 5.2.1 (a) a violation of any of the provisions identified in this Bylaw shall result in liability for penalties and late payment amounts established in Schedule A of the Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122; and
- (b) a violation of any of the provisions identified in this Bylaw shall be subject to the procedures, restrictions, limits, obligations and rights established in the *Notice of*

*Bylaw Violation Dispute Adjudication Bylaw No. 8122 in accordance with the
Local Government Bylaw Notice Enforcement Act, SBC 2003, c.60.*

- 5.2.2 Every person who contravenes any provision of this Bylaw is considered to have committed an offence against this bylaw and is liable on summary conviction, to the penalties provided for in the *Offence Act*, and each day that such violation is caused, or allowed to continue, constitutes a separate offence.

FIRST READING

SECOND READING

THIRD READING

ADOPTED

MAYOR

_____	CITY OF RICHMOND

_____	APPROVED for content by originating Division
_____	APPROVED for legality by Solicitor

CITY CLERK

Schedule A to Bylaw _____

Noise Zones

Category	Quiet Zone	Intermediate Zone	Activity Zone
1. Standard Zoning (subject to Category 4)	<ul style="list-style-type: none"> Residential Zones commencing with RS, RC, RD, RI, RT, RA Residential / Limited Commercial Zones commencing with RCL Institutional Zones commencing with ASY, HC Mixed Use Zones commencing with CN, CS 	<ul style="list-style-type: none"> Mixed Use Zones commencing with CDT Commercial Zones commencing with CL, CC, CA, CEA, CG, CP, CV, CR Marina Zones commencing with MA1, MA2 Institutional Zones commencing with AIR, SI Agriculture & Golf Zones commencing with AG, GC 	<ul style="list-style-type: none"> Industrial Zones commencing with I, IL, IB, IR, IS
2. Site Specific Zoning (subject to Category 4)	<ul style="list-style-type: none"> Residential Zones commencing with ZS, ZD, ZT, ZLR, ZHR Residential (Other) Zones commencing with ZR 	<ul style="list-style-type: none"> Mixed Use Zones commencing with ZMU Commercial Zones commencing with ZC Public Zones commencing with ZIS Agricultural Zones commencing with ZA 	<ul style="list-style-type: none"> Industrial Zones commencing with ZI

Category	Quiet Zone	Intermediate Zone	Activity Zone
3. Land Use Contracts (subject to Category 4)	<ul style="list-style-type: none"> 001-009, 011-021, 023-027, 029-037, 040-050, 052-061, 063, 065-069, 071-077, 081-086, 088-090, 093-102, 104-117, 120-121, 123-125, 129-138, 140-165 	<ul style="list-style-type: none"> 010, 022, 028, 051, 062, 064, 070, 078, 079, 087, 092, 119, 122, 126, 128 	<ul style="list-style-type: none"> 039, 091, 127, 139
4. Additional Designations		<ul style="list-style-type: none"> All parcels that would otherwise be classified as a Quiet District that are in Areas 1A or 2 as outlined in the OCP Aircraft Noise Sensitive Development Table contained in Section 5.4 - Noise Management in the Richmond Official Community Plan Bylaw No 7100 All parcels bordering a municipal 4-lane roadway, Highway 91 or Highway 99 	<ul style="list-style-type: none"> All roadways

Schedule B to Bylaw _____

Summary of Permitted Outdoor Sound Levels by Zone

		Sound Receiver Zone					
		Quiet		Intermediate		Activity	
		Day	Night	Day	Night	Day	Night
Sound Source Zone	Quiet	55 dBA	45 dBA	60 dBA	50 dBA	70 dBA	70 dBA
		65 dBC	55 dBC	70 dBC	60 dBC	80 dBC	80 dBC
	Intermediate	60 dBA	50 dBA	60 dBA	50 dBA	70 dBA	70 dBA
		70 dBC	60 dBC	70dBC	60 dBC	80 dBC	80 dBC
	Activity	60 dBA	50 dBA	65 dBA	55 dBA	70 dBA	70 dBA
		70dBC	60 dBC	75 dBC	65 dBC	80 dBC	80 dBC

Note: the permitted outdoor **dBC** sound level is 10 dB higher than the permitted **dBA** sound level.

**NOISE REGULATION
BYLAW COMPARISON CHART**

	PROPOSED BYLAW	CURRENT BYLAW	VICTORIA BYLAW	VANCOUVER BYLAW
Daytime	7 a.m. to 8 p.m. Monday through Saturday 10 a.m. to 8 p.m. Sundays and holidays	7 a.m. to 8 p.m.	7 a.m. to 10 p.m. on a weekday or Saturday 10 a.m. to 10:00 p.m. Sundays and holiday	7 a.m. to 10 p.m. on weekday or Saturday 10 a.m. to 10 p.m. Sundays or holiday
Point of Reception	Outdoors within the property line the best represents where the sound is received	Where the sound is received or any place on a strata lot other than the source	At receiver's property line or at representative location within property line	On public side of property line or if there is no public property between source and receiver properties then anywhere outside source property
Method to measure objective sound levels	L_{eq}	Uses "continuous sound" method	L_{eq}	Uses "continuous sound" method generally and L_{eq} for particular sections.
Subjective method	Yes, if objective measurement not practical	Yes, in addition to objective sections	Yes, but subject to compliance with objective sections.	Yes, in addition to objective sections
Objective limit where point of reception is in a quiet zone (daytime)	55 dBA or 65 dBC from a quiet zone. 60 dBA or 70 dBC from an intermediate zone 60 dBA or 70 dBC from an activity zone.	Non-continuous sound of 80 dBA limit Continuous sound of 55 dBA	55 dBA from a quiet zone 60 dBA from an intermediate zone 60 dBA from an activity zone	55 dBA from a quiet zone 60 dBA from an intermediate zone 60 dBA from an activity zone
Objective limit when point of reception is in a quiet zone (nighttime)	45 dBA or 55 dBC from a quiet zone. 50 dBA or 60 dBC from an intermediate zone. 50 dBA or 60 dBC from an activity zone	Non-continuous sound of 75 dBA limit Continuous sound of 45 dBA	45 dBA from a quiet zone 50 dBA from an intermediate zone 55 dBA from an activity zone	45 dBA from a quiet zone 55 dBA from an intermediate zone 55 dBA from an activity zone

	PROPOSED BYLAW	CURRENT BYLAW	VICTORIA BYLAW	VANCOUVER BYLAW
Objective limit when point of reception is in an intermediate zone (daytime)	60 dBA or 70 dBC from a quiet zone. 50 dBA or 60 dBC from an intermediate zone. 65 dBA or 75 dBC from an activity zone	Non-continuous sound of 80 dBA Continuous sound of 65 dBA	55 dBA from a quiet zone 60 dBA from an intermediate zone 65 dBA from an activity zone	60 dBA from a quiet zone 70 dBA from an intermediate zone 70 dBA from an activity zone
Objective limit when point of reception is in an intermediate zone (nighttime)	50 dBA or 60 dBC from a quiet zone. 50 dBA or 60 dBC from an intermediate zone. 60 dBA or 65 dBC from an activity zone	Non-continuous sound of 75 dBA. Continuous sound of 60 dBA	50 dBA from a quiet zone 55 dBA from an intermediate zone 60 dBA from an activity zone	55 dBA from a quiet zone 65 dBA from an intermediate zone 65 dBA from an activity zone
Objective limit when point of reception is in an activity zone (daytime)	70 dBA or 80 dBC from a quiet zone. 70 dBA or 80 dBC from an intermediate zone. 70 dBA or 80 dBA from an activity zone	Non-continuous sound of 80 dBA. Continuous sound of 65 dBA	60 dBA from a quiet zone 65 dBA from an intermediate zone 70 dBA from an activity zone	60 dBA from a quiet zone 70 dBA from an intermediate zone 70 dBA from an activity zone
Objective limit when point of reception is in an activity zone (nighttime)	70 dBA or 80 dBC from a quiet zone. 70 dBA or 80 dBC from an intermediate zone. 70 dBA or 80 dBC from an activity zone	Non-continuous sound of 75 dBA. Continuous sound of 60 dBA	60 dBA from a quiet zone 65 dBA from an intermediate zone 70 dBA from an activity zone	55 dBA from a quiet zone 65 dBA from an intermediate zone 65 dBA from an activity zone
Exemptions by permission	Yes, to the General Manager of Engineering for events and construction	Yes, to the General Manager of Engineering for construction only	Yes, to Chief Building Inspector for construction and Director of Parks for outdoor events	Yes, to the Mayor for construction only

	PROPOSED BYLAW	CURRENT BYLAW	VICTORIA BYLAW	VANCOUVER BYLAW
Appeal	Yes, to Council under limited circumstances	No	Yes, to Council	No

Richmond Noise Regulation Bylaw

Rationale for Noise Zones & Point of Reception

