



City of Richmond

Report to Committee

To: Planning Committee

Date: February 21, 2019

From: James Cooper
Director, Building Approvals

File: 08-4430-01, 12-8060-20-009524/009737

Re: Single Family Building Massing Regulations (Council Referral)

Staff Recommendation

That the staff report titled "Single Family Building Massing Regulations (Council Referral)" dated February 21, 2019 from the Director of Building Approvals, be received for information.

James Cooper
Director, Building Approvals
(604-247-4606)

JC:jr

Att. 3

REPORT CONCURRENCE		
ROUTED TO: Development Applications	CONCURRENCE <input checked="" type="checkbox"/>	CONCURRENCE OF GENERAL MANAGER
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

At the June 26, 2017 Regular Council Meeting, and in addition to Council's First Reading of Bylaw 9737 for new single family dwelling building massing regulations, the following referrals were passed:

- (1) that staff report back to Council within 12-months with a follow-up report on implementation of new massing regulations; and*
- (2) that staff report back to Council with bylaw amendments for single family building massing in all zones that permit single family residential development.*

This Staff Report responds to these referrals from Council following the implementation of the new massing regulations. Based on staff's review, staff find that the regulations are working as intended and have resulted in new homes being constructed with improved articulation and scale that is more compatible with existing neighbourhood form.

Background

Since September 14, 2015, there have been a series of bylaw amendments that have been adopted by Council which address single family dwelling building massing. The most recent regulations were adopted by Council on July 24, 2017 (Zoning Amendment Bylaw 9737) in efforts to improve access to open space, daylight and quality of landscape areas. The most recent amendment introduced the following regulations, amongst others:

- A requirement to restrict the length of a continuous exterior wall, oriented to an interior side yard to no more than 55% of the lot depth.
- Limiting front garage and side yard projections.
- Minimum live landscaping requirements.
- Requiring one new or replacement tree in the front yard of each new single family lot.
- A variable rear yard setback requirement for lots greater than 372 m², or deeper than 28 m, or where a minimum 9 m front yard setback is required.

Additional time beyond the 12 month period stipulated in the June 26, 2017 referral, was required to conduct this review in order to allow for homes subject to these new regulations to be constructed in the field. Through the implementation and staff's review of Single Family Building Massing Regulations and consultation, staff are of the opinion that the current Single Family Building Massing Regulations are working as originally intended. Accordingly, staff are of the opinion that no amendments to the existing regulations are required.

Analysis

Since the second phase of Single Family Building Massing Regulations were implemented in July 2017, City staff continue to see marked improvement in the built form and massing of new single family homes. Through review of new Building Permit applications and observations in the field, staff are confident that the overall suite of regulations in the zoning bylaw are working well. Attachment 1 provides a sample of some of the front elevations of new homes approved since the new massing regulations were adopted.

The adopted regulations have resulted in houses being constructed with improved building proportion, articulation and massing that is at a scale which provides a more appropriate interface to existing residential neighbourhoods. Positive impacts from increased rear yards and prevention of continuous wall lengths that run from front to rear yard setbacks include improved access to daylight, quality of private outdoor space, and second storey overlooks between houses.

Council also previously referred the definition of continuous wall to staff for further review. In a memorandum to Mayor and Councillors dated January 18, 2018 (Attachment 2), City staff analyzed and examined the effect of limiting the definition of a continuous wall to solely the second storey portions of a building. In the memorandum, staff noted that the definition of continuous wall should continue to apply to all heights of a sidewall at the minimum sideyard setback. The City of Richmond Zoning Bylaw 8500 permits a single storey of a single detached building to be a maximum of 5 m in height, measured from the finished floor to the underside of the interior ceiling. When a roof is added, the massing effect at the minimum sideyard is considerable.

Consultation

As part of the review, City staff met with a number of applicants through the building permit application process and with home builders, including The Richmond Home Builders Group (RHBG). In addition, the RHBG submitted comments to the City dated September 25, 2018 (Attachment 3) with respect to the 12-month review following the adoption of the Single Family Building Massing Regulations. Their letter generally identifies four areas of the new regulations that are of concern:

1. Continuous Wall (purpose, definition and relationship to covered patios).
2. Sideyard Projections.
3. Yards and Setbacks.
4. Lot Depth on Irregular Shaped Lots

Staff have reviewed the letter submitted by the RHBG and for the most part, do not agree with their assessment and recommendations. With respect to comments received regarding the determination of lot depth on irregular shaped lots, staff can appreciate that additional consideration should be given to the particular geometry of the lot and the rear yard setbacks on adjacent lots. In situations where one property line contributes disproportionately more to the lot depth, this can result in a greater rear yard setback requirement than would otherwise be applied to a neighbouring regularly shaped lot. However, in determining the appropriate lot depth for the

purposes of determining the required rear yard setback, staff feel that this could be best assessed through the City's existing variance processes (Board of Variance or Development Variance Permit). In both cases, the variance would proceed through a public process allowing public input.

Further, some of the issues raised in the RHBG correspondence relate to matters which they previously identified during the second phase of the City's Building Massing Regulations, including the application of the continuous wall requirement. Accordingly, staff are of the opinion that their concerns in this regard have already been considered at the time that the regulations were adopted in July 2017.

Consideration of Building Massing in Other Zones

Council has also requested that staff report back on amendments for single family building massing in all zones that permit single family residential development.

The following massing regulations were previously introduced and apply in the case of single detached housing in all zones:

- A maximum of one side yard projection for the purpose of a fireplace or chimney assembly.
- Projections into front and rear yards for bay windows and hutches.
- Projections for garages limited to 9.1 m from the front wall.
- Regulations on the minimum percentage for front yard landscaping.

Of the adopted Single Family Building Massing Regulations currently in place, only the following do not apply to single family buildings in other zones:

- Maximum height of 7.5 m (24.6 ft.) for a flat roof house.
- Establishing a variation for rear yard setbacks for the first storey elevation.
- Limiting the length of a continuous wall oriented to an interior side yard to a maximum length of 55% of the total lot depth.

The above regulations were developed to apply to single family house massing in an urban environment. Other established zones, such as the compact single detached zones and site specific zones, have existing established regulations written into the zoning to guide and inform the massing of new development within those zones. In addition, Council has already established a number of regulations related to single detached homes within the "Agriculture (AG1)" zone through the home farm plate, and maximum height and house size requirements.

Accordingly, staff are of the opinion that sufficient regulations exist within the general provisions and site specific zones of Bylaw 8500 to provide for the appropriate building massing single family homes in other zones and that no new amendments are required at this time.

Financial Impact

None.

Conclusion

After a staff review of Building Permit applications for new single detached homes, observation of new homes constructed in the field, and consultation, staff are of the opinion that the regulations are working as intended. Further, the City already has existing review processes in place to accommodate one-off requests for relief from these regulations. In addition, staff believe that the City of Richmond Zoning Bylaw 8500 already provides sufficient regulations to regulate the massing of single family homes in other zones and that no new amendments are required at this time.



Joshua Reis, MCIP, RPP
Program Coordinator, Development
(604-204-8653)

JR:blg

Attachments:

Attachment 1: Sample Photographs of Single Detached Homes

Attachment 2: Memorandum to Mayor and Councillors dated January 18, 2018

Attachment 3: Letter from Richmond Home Builders Group dated September 25, 2018

**Building Mass 12 Month Update: RTC
Photo Samples of House Size – AFTER ADOPTION OF BYLAW AMENDMENT**

1. 10641 Hollybank Drive – Lot Size: 408.34 sq. m. Total House Floor Area: 274.06 sq. m.



2. 3891 Richmond St – Lot Size: 445.45 sq. m. Total House Floor Area: 293.10 sq. m.



3. 3091 Chatham St – Lot Size: 367.72 sq. m. Total House Floor Area: 253.3 sq. m.



4. 4791 Lancelot Drive – Lot Size: 651.70 sq. m. Total House Floor Area: 335.60 sq. m.





City of
Richmond

TO: MAYOR & EACH
COUNCILLOR
FROM: CITY CLERK'S OFFICE

Memorandum
Planning and Development Division
Building Approvals

To: Mayor and Councillors
From: Gavin Woo, P. Eng.
Senior Manager, Building Approvals
James Cooper, Architect AIBC
Manager, Plan Review
Date: January 18, 2018
File: 12-8360-01/2018-Vol 01
Re: **Referral 08-4000 for Continuous Wall Definition: That staff examine the definition of "Continuous Wall" on a second storey of a single-family dwelling and report back**

This memorandum is in response to the regular Council meeting on July 24, 2017 whereby Council introduced a referral motion to direct staff to examine the definition of "Continuous wall" on a second storey of a single-family dwelling and report back.

To address concerns raised about the impact of new house construction on adjacent, pre-existing established neighbourhoods, staff recommended that Part B, Sections 8.1.8.14 Richmond Zoning Bylaw 8500 be amended as follows:

No **single detached housing dwelling unit** shall have an exterior wall oriented to an **interior side yard** with a maximum length of **continuous wall** greater than 55% of the total lot depth.

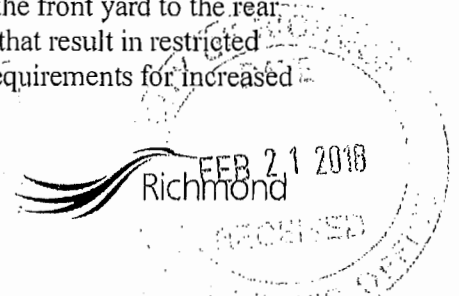
In order to implement this new regulation, a new definition of a **continuous wall** was proposed as:

Continuous wall means an exterior wall on a **single detached housing dwelling unit**, which does not include an inward articulation of 2.4 m or more, with a minimum horizontal measurement of 2.4 m.

The following analysis examines the effect of limiting the definition of continuous wall to solely second storey portions as opposed to the entire wall regardless of storey height as per proposed staff recommendation.

Background:

On July 24, 2017 Council adopted Amendment Bylaw No. 9737 Single Family Building Massing Regulations to the Zoning Bylaw to address concerns raised due to building massing. In order to improve access to daylight and privacy for adjacent properties, the overall length of a wall located at the minimum interior side yard is limited to 55% of the length of the lot at that property line. This requirement intends to eliminate excessively long houses that extend from the front yard to the rear yard setback creating large length disparities with adjacent existing houses that result in restricted daylight access and privacy complaints. The regulation also supports the requirements for increased



rear yards by encouraging articulation at the rear wall that is achieved through different lengths of side walls.

Analysis:

In order to effectively address concerns of restricted daylight access and privacy complaints, the definition for continuous wall must be applied to all heights of a sidewall at the minimum required side yard setback. The reasoning is as follows:

1. The total depth of a side wall may be derived from one storey portions (such as from a garage) that extend higher portions of the sidewall deeper into the lot. These extended portions limit access to daylight and restrict privacy for adjacent neighbors' back yards. Limiting the definition to only two storey portions would defeat the purpose of the regulation and allow designs that distribute their bulk toward the rear of the property.
2. In order to bring the overall massing of new construction closer to parity with existing houses, the length of a continuous wall at the side yard must relate to adjacent dwellings, irrespective of the height of a wall. Limiting the definition to only two storey portions would allow designs that are perceived as excessively extended by an adjacent neighbor.
3. The storey height is defined as 5.0 m from the finished floor to the underside of interior ceiling. When a roof is added to storey height, the massing effect at the minimum side yard is considerable. The intention of the regulation is to limit such massing effects that have negative impacts to adjacent side neighbors.

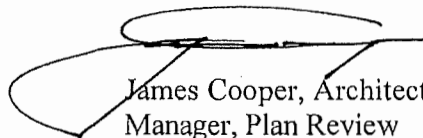
Conclusions:

The zoning bylaw amendments, adopted July 24, 2017, intend to improve the massing of new construction to increase outdoor space, access to daylight, and privacy for all neighbourhood dwellings. In order to effectively address these concerns for adjacent properties, it is essential that the length of a side wall is regulated by the existing regulation, irrespective of the storey height of the wall. Since the implementation of the regulation to limit the continuous length of wall at the required side yard, the regulation has shown to be applicable throughout the building permit applications received. The applications demonstrate designers have been able to successfully incorporate the requirement without issue that has resulted in better integration in design.

For additional information, please contact James Cooper at (604) 247-4606 or via email jcooper2@richmond.ca or Barry Konkin at (604) 276-4606 or via email bkonkin@richmond.ca.



Gavin Woo, P. Eng.
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James Cooper, Architect AIBC
Manager, Plan Review

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Wayne Craig, Director, Development



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Richmond Home Builders Group

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September 25th, 2018

ATTENTION: WAYNE CRAIG

City of Richmond
6911 No 3 Road
Richmond, BC
V6Y 2C1

RE: BYLAW 9737 REVIEW AND CONCERNS:

Dear Mr. Wayne Craig,

As you may recall, on July 17th 2017 the City Council had requested a One Year Follow up Report from the city staff to gauge the effectiveness of Bylaw 9737 for all parties affected by the implementation. On behalf of our members, Richmond Home Builders Group would like to provide the following detailed feedback with the respect to Bylaw 9737.

Overall, the bylaw achieved most of what the City had intended, however, there are a number issues and concerns that are contributing negatively to our ability to design a home within the stated guidelines. We have solicited feedback from a number of professionals including Architects, Plan Designers, Structural Engineers and Energy Advisors, that render their services in Richmond. As well, we have received feedback from numerous builders in Richmond that have expressed similar concerns.

For most items, these are merely a City staff interpretation issues, please see our attached detailed report titled "Bylaw 9737 One Year Review". The following provides an overview of some of the concerns.

1. **Continuous Wall Purpose:** The reason for the articulation was to provide relief to the neighbouring property in terms of privacy and sunlight. Our computer modeling and discussions with the city clearly point to this being a concern for the second storey only. Having the articulation on the main floor, particularly for smaller lots, is the main source of complaints from designers and owners. After all, the massing is on the top floor of a building, as such, it is requested that the Continuous Wall be defined to state **upper storey only**.



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- a. Another unintended consequence of additional articulations for new homes constructed in Richmond, which is backed scientific modelling, shows that articulations make it more difficult to achieve a good air tightness building as now required with the new BC Energy Step Code implemented by the Richmond City Council as of this month.
- b. **Rental Housing in Richmond:** With the requirement to build a jog of 8 feet inward articulation after 55% of a continuous wall, the area that is now being left vacant would have typically been a bedroom or a small kitchen of a rental suite. With the advent of the new bylaw, no new homes can be designed with the rental unit as too much floor space is lost on the ground floor. With the current BC government introducing Speculation Tax, as well as, increased Property and School tax programs, many new buyers could potentially use rental suites to mitigate concerns and actually help the local people by providing additional housing. **The current implementation of the Bylaw 9737 runs contrary to this housing strategy.**
2. **Continuous Wall Definition:** Disparity exists between calculated definition of 55% and City Info Bulletin 33. Recommend amending Sec.8.1.11.1 to reflect Info Bulletin 33.
3. **Covered Patios:** Covered patios are critically important components to providing quality usable outdoor space, however, for some unknown reason; any post that supports a patio is counted as a **continuous wall**. We recommend amending definition and length of a continuous wall to continuous second storey wall, as previously stated and to remove reference to post as being the end point of the calculated measurement.
4. **Side Yard Projections:** Current definition state that only a single side yard projection is permitted for a fireplace and no masonry footing is allowed. Without a concrete footing, it is difficult to build an aesthetically looking and functional wood frame support for a fireplace.
5. **Yards and Setbacks:** Prior to bylaw 9737 the shorter 6.0m rear yard requirements meant Lot Depth had little impact on the overall design of a house. With the new 8.1.6.6 rear yards at 20% and 25%, combined with the Residential vertical lot depth envelope limitation, it has become difficult to design a good, best practices, upper floor.
6. **Lot Depth Definition:** The definition used by the City applies clearly to lots that are rectangular in shape, however, for irregular lots, the average calculation used by the



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staff, is posing a great disadvantage to affected owners in terms of style, size and salability of a home that can be constructed.

RHBG thanks you for your time and look forward to hearing from you soon.

Kind regards,

Richmond Home Builders Group

CC: James Cooper

Bylaw 9737 One Year Review

CONTINUOUS WALL

Sec.3.4 Continuous wall means an exterior wall on a single-family dwelling, which does not include an inward articulation of 2.4 m or more, with a minimum horizontal measurement of 2.4 m

8.1.11 Other Regulations 1. No single detached housing dwelling unit shall have an exterior wall oriented to an **interior side** yard with a maximum length of **continuous wall** greater than 55% of the total **lot depth**

FEEDBACK / SUGGESTIONS:

1. **Continuous wall** length of 55% is currently calculated based on adjacent property line length, not the **lot depth** from Sec.3.4. Recommend amending Sec.8.1.11.1 to reflect Info Bulletin 33.
2. Covered patios are critically important components to providing quality usable outdoor space, when designed within general height of the main floor massing the covered patio has little if any detrimental affect to the neighbouring properties. At present any post supporting the roof structure of covered patios is included in the **continuous wall** length. Where as an exterior wall ends at the point where the patio starts. Recommend amending definition and length of a **continuous wall** to **continuous second storey wall**.

CONTINUOUS WALL & 8.1.6.6 NOTWITHSTANDING SECTION

- a) The minimum **rear yard** is 6.0 m for:
 - i) a **lot** with a lot area less than 372 m²; or
 - ii) a **lot** with a **lot depth** less than 28 m; or
 - iii) a **lot** located on an **arterial road** where a **zone** requires a minimum **front yard** of 9.0 m; or
 - iv) a **lot** containing a single detached dwelling of one storey only.

FEEDBACK / SUGGESTIONS:

1. On smaller lots the rear yard requirements are given relief as per Sec.8.1.6.6 One these same smaller lots the **Continuous wall** length limitation and inward articulation requirement restricts the massing disproportionately compared to the size of the house.
2. We strongly recommend that the 8.1.6.6 Notwithstanding Section be applied to Sec.8.1.11 Other Regulations Par.1

PROJECTIONS INTO YARDS IN SINGLE DETACHED HOUSING

Sec.4.7.1(b) *Notwithstanding a provision for a projection into a **side yard**, the maximum number of projections is one, limited to one side wall of single detached dwelling unit, for the purposes of a chimney or fireplace assembly only, and shall not exceed 1.8 m in horizontal length. No masonry footing is permitted for the chimney or fireplace assembly.*

FEEDBACK / SUGGESTIONS:

1. With out a footing under a fireplace projection the fireplace must be raised to accommodate wood framing support and insulation. Recommend deleting from both Sec.4.7.1(b) and Sec.4.7.3(b) the last sentence "... No masonry footing is permitted for the chimney or fireplace assembly"
2. Projection into an exterior side yard help provide articulation to building facades that are designed as the front of the house despite facing a side yard. Without boxouts and with the increased rear yard requirements the flanking street elevation of exterior lot developments become flat and unattractive to the streetscape. Recommend amending Sec.4.7.1(b) to **interior side yard**.

8.1.6 YARDS & SETBACKS

8.1.6.6. The minimum **rear yard** is the greater of 6.0 m or 20% of the total **lot depth**, for a maximum width of 60% of the rear wall of the **first storey**; and 25% of the total **lot depth**, for the remaining 40% of the rear wall of the **first storey** and any second **storey**, or **half (½) storey** above, up to maximum required setback of 10.7 m.

FEEDBACK / SUGGESTIONS:

1. The critical factor for 8.1.6.6 is **Lot Depth**.
2. Prior to bylaw 9737 the shorter 6.0m rear yard requirements meant **Lot Depth** had little impact on the overall design of a house. With the new 8.1.6.6 rear yards at 20% and 25%, combined with the **Residential vertical lot depth envelope** limitation, the upper floor in particular can be challenging to design, to the point of comprising best practices for good design.

3.4 LOT DEPTH

Lot Depth means the least horizontal distance between the front and rear lot lines, but where the lot has an irregular shape, the minimum lot depth may be the average of the lot line with the least lot depth and the lot line with the most lot depth, provided that the City is satisfied that this lot depth is consistent with the shape of abutting lots and provides a comparable buildable area to adjacent lots.

FEEDBACK / SUGGESTIONS:

1. As stated the critical factor for 8.1.6.6 is **Lot Depth**.
2. Currently lots are either rectangular where there is only one out come for **Lot Depth**, or the lot is classified irregular and the average of the side property lines is used as **Lot Depth**.
3. We strongly recommend that the **Lot Depth** definition be reviewed and amended to ensure that **Lot Depth** is not limiting a building envelope beyond that of a neighbouring property. We recommend the line "*... lot depth is consistent with the shape of abutting lots and provides a comparable buildable area to adjacent lots*" be better written into the definition to provide relief where an otherwise limiting **Lot Depth** calculation results and a lot depth / building envelope less than that of the neighbouring property.