BUILDING HEIGHT: Proposed BYLAW 16733 (Jan 26, 2015 Council Agenda, Item 5.3) and BYLAW 17062 (Feb 9, 2015 Council Agenda Item 3.13)

Major PROPOSED AMENDMENTS	ANALYSIS/IMPACTS	Potential RECOMMENDATIONS
A: Delete storeys as a height limit; e.g. RF1: "The maximum Height shall not exceed 10.0 m nor 2 ½ Storeys" becomes "The maximum Height shall not exceed 10.0m,"	-Does not change the peak height of buildings if all other regulations remain. - Rounds up the 2.5 storey to a 3 storey building, resulting in a larger building. **See Figure 1** -Provides more flexibility in interior housing styles; e.g. raised basements, multiple split levels -Allows development of additional floors without increasing the building height **See Figure 2**	Options: 1. Keep Storeys as a height limit 2. Delete Storeys as a height limit but keep existing height definitions and regulations
B: Delete Section 814.3(14) of the MNO: "The Floor Area of the upper half Storey of a 2 ½ Storey building shall not exceed 50% of the structure's second Storey Floor Area."	-Mature Neighbourhood 2.5 Storey housing can become 3 Storey housing – increases massing. -Encourages flat roofs and mansard roofs which are not consistent with mature housing roof types.	Maintain Section 814.3(14)
C: Change maximum Height of RA7 (low-rise apartments) and RF6 (stacked row housing) from 14 m to 16 m	- -increases massing, shadowing, blocking of views and to some extent wind - accommodates 4 high ceiling storeys and a sloped roof -Could be OK if consistent with other building heights on the block and block face	Options: 1. Keep 14 m Height 2. Allow 16 m maximum Height if the average height of adjacent properties is 14 m or greater 3. Amend to 16 m Height

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CHANGE DEFINITION of HEIGHT:		
D: Relocate regulations currently within the definition for height to section 52 Height	Development Officers (DO) are not to change definitions; however, they can vary regulations, thus the proposed change would give DOs more powers to vary height regulations. Decisions may become less consistent	Keep the height definition in the definition section
E: Change the method of calculating the midpoint of a sloped roof and add an explanatory diagram. Delete measuring the roof midpoint as "the average level between eaves and ridges". Replacement: "The midpoint is determined to be between the intersection of the structural supports on the exterior wall and the top of the roof deck, and the top of the roof or parapet."	-The proposed method of calculating the midpoint of a sloped roof aligns with common practice and clarifies the method of calculating the midpoint. -Given the proposed method, the midpoint does not vary with the size of roof overhangs.	Adopt the proposed method of measuring roof midpoint
F: Retain height as the distance between average grade (typically the average elevation of the property corners) and the midpoint of the roof	-Measuring to midpoint encourages a variety of non-flat roof styles -When measuring to the roof midpoint, peak height varies with roof length, thus height of ridge/peak beyond midpoint needs to be regulated. -The other common measurement method is measuring to roof peak. Measuring to peak (highest point on roof surface) is simple to understand and does not require multiple regulations. However, measuring to the peak encourages flat roofed buildings which are more massive than the sloped roof buildings with the same high point. Measuring to the midpoint creates more equitable massing.	Retain height measurement to midpoint of roof if peak elevation is also regulated.

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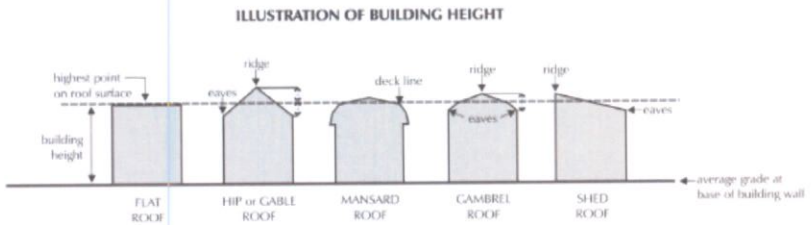
	-Mansard roofs are nearly the same dimensions as flat roofed buildings thus some cities (e.g. Ottawa) measure mansard roof height to the deck line, rather than to the mid-point of the roof. Here is the illustration from Ottawa:  	Measure mansard roof buildings from the average grade to the deck of the roof.
G: Remove the distinction between roof pitches steeper than 20 degrees and those less steep than 20 degrees. Existing bylaw: Height of low slope roofs is measured to the peak. Proposal: Height of low slope roofs is measured to the midpoint of the roof, same as steep slope roofs.	-The existing bylaw discourages the use of low slope roofs in favor of steep roofs or flat roofs. -Removal of the distinction allows low slope roofed buildings to be slightly higher (approx. half meter) **See Figure 3** -Removes a somewhat arbitrary rule. -Simplifies the Height definition/regulation	Options: 1. Height of low slope roofs is measured to the peak. 2. Height of low slope roofs is measured to the midpoint of roof.
H: Remove the 1.5 m maximum height above the maximum midpoint height for a pitched roof	Creates the potential for excessive peak heights – over 15 m peak heights for houses in Mature Neighbourhoods and over 19 m peak heights for other neighbourhoods vs. the present 10.1m and 11.5 m peak limits. **See Figures 4A-4C**	**ESSENTIAL: Maintain a maximum peak height above the midpoint.** Options: 1. Maintain the 1.5 m maximum height of peak above maximum midpoint height of pitched roofs

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	House builders want to build 2 storey houses with steep roofs extending beyond the existing 11.5 m peak height limit in new neighbourhoods. The removal of the regulation of peak height allows this. Rather than totally deregulating peak height, the city could create a new zone with an increased peak height. It could be used in new areas of the city in blocks of housing with similar peak heights. Alternatively, contextual building heights could be created with a range of peak heights being possible. The peak height limit within the range would be determined by the average peak height of the adjacent buildings. Calgary uses this method.	2. Create a new zone for two storey houses with steep roofs. 3. Create contextual building height limits for: a) Mature Neighborhoods, or b) all areas.
I: Add a new method to calculate grade where the front property line is at least two meters higher than the rear property line. The Development Officer may determine Grade by calculating the average elevation of the front corners of the lot, and along the side property lines a distance equal to the minimum setback in the underlying zone from the front property line.	This new method of calculating grade, plus the elimination of storey limits, will enable buildings with a walkout basement or drive under garage to obtain development approval without requiring development regulation variances. -These changes allow extensive building elevations in the rear of sloped lots. For example, a low-rise lot facing a hill top street could be 14 m in height at the front and potentially double or more that height at the rear if the lot was very sloped. Given the proposed amendments this would be permitted as a property right.	Options: 1. Put a limit on the difference between the height of the building exposed in the front vs the rear; for example, a maximum 30% height difference or a flat 3 m difference. 2. Add the proposed new method. When the method is used the development permit is Class B – neighbouring property owners and league are notified and have right to appeal. 3. As proposed, add the new method for Class A development permits – no notifications or appeals.

Figure 1: Number of Storeys in House

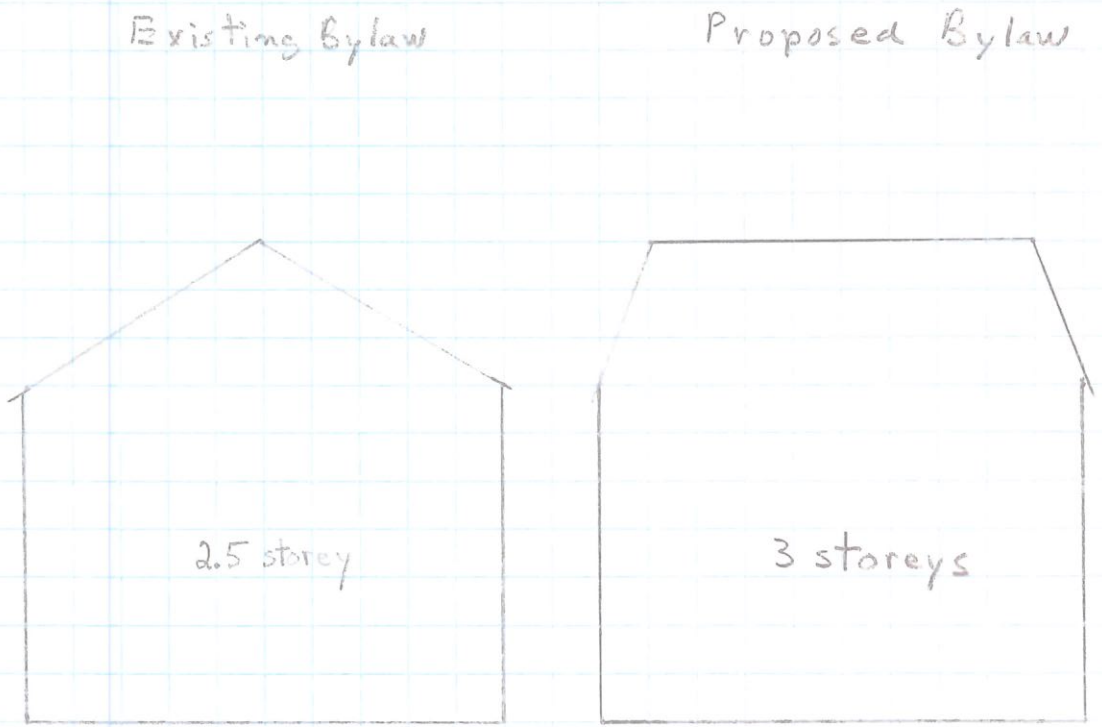

Figure 2: Number of Storeys in Flat Roof House

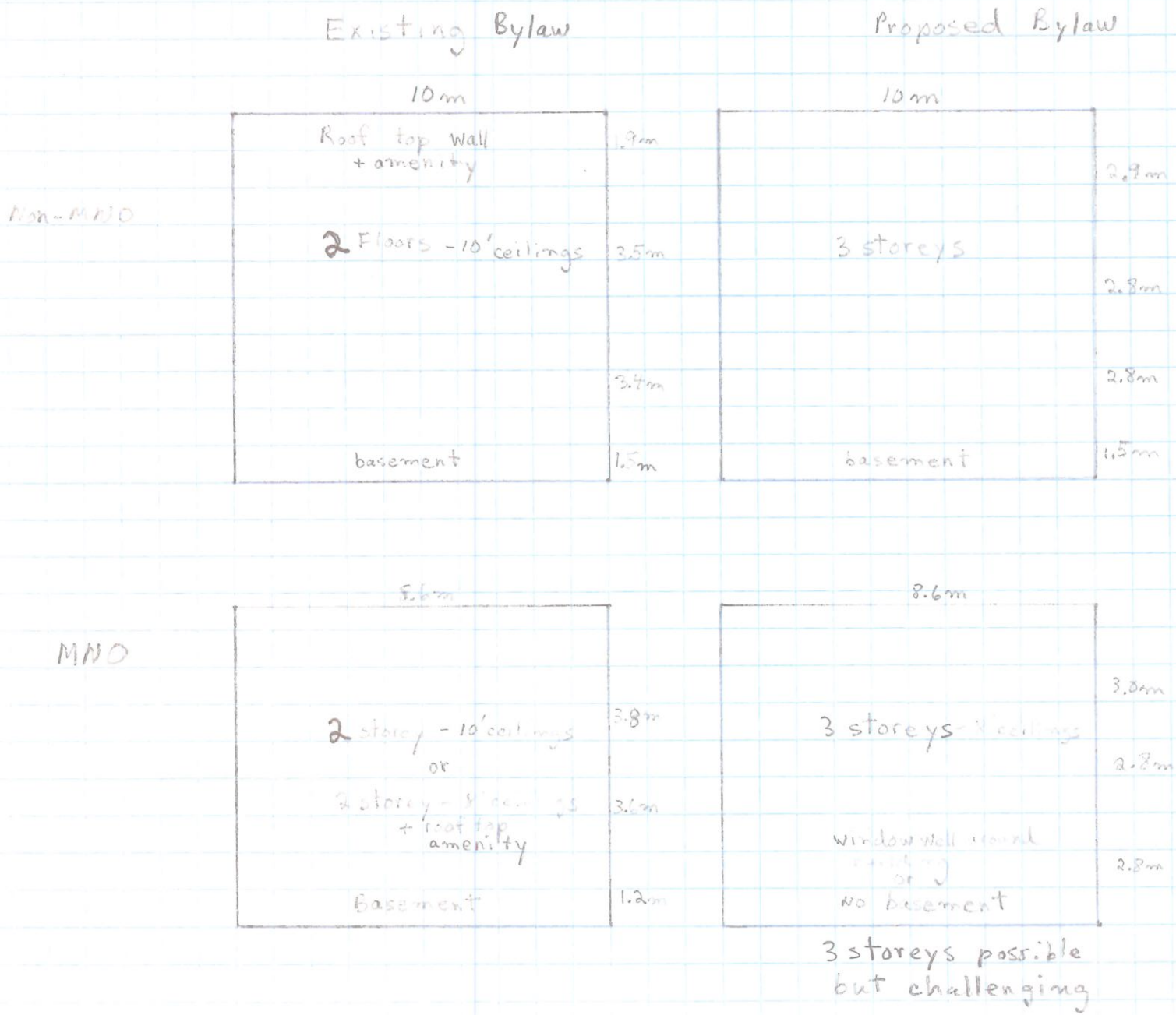

Figure 3: Low Slope Roof

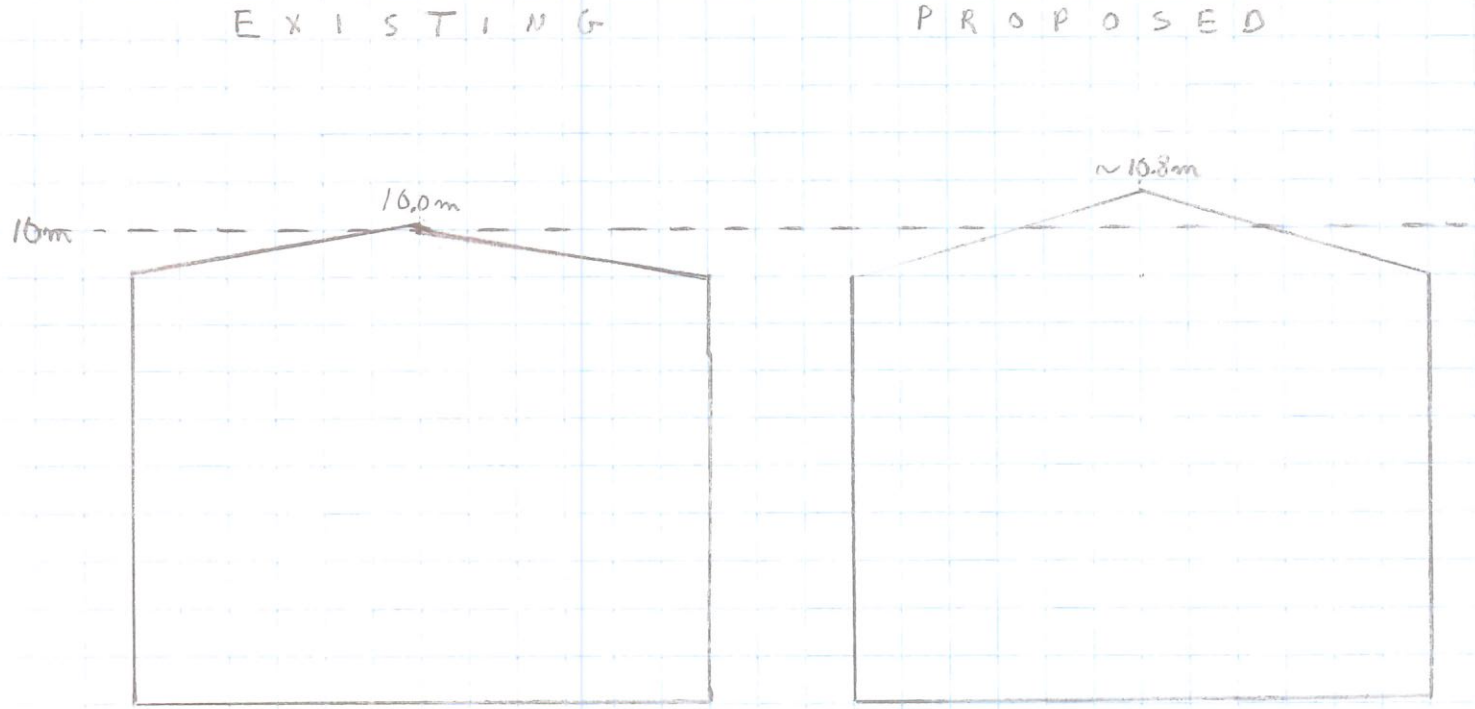

Figure 4A - Gable Roof of House in Mature Neighbourhood

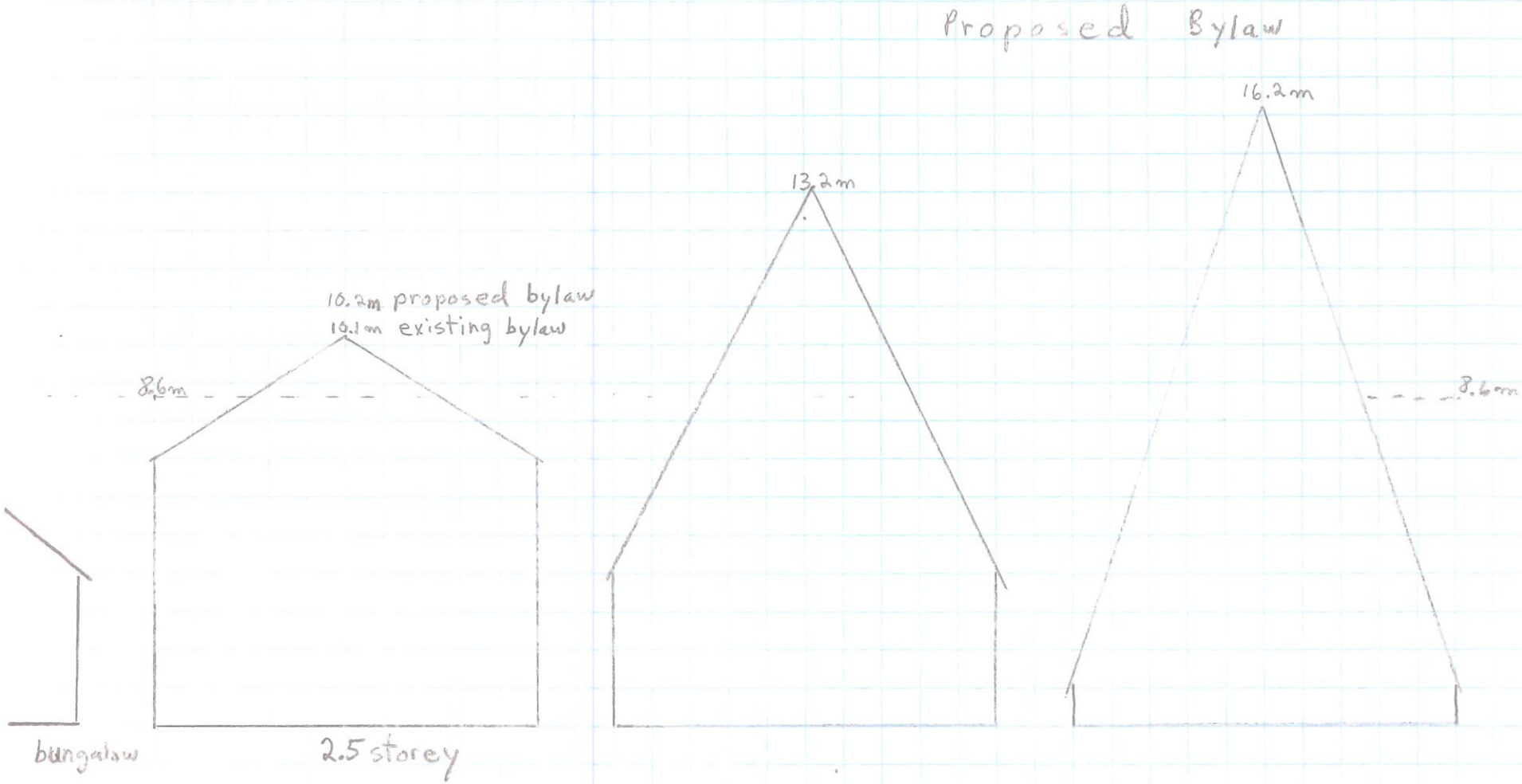

Figure 4B: Shed Roof of House in Mature Neighbourhood

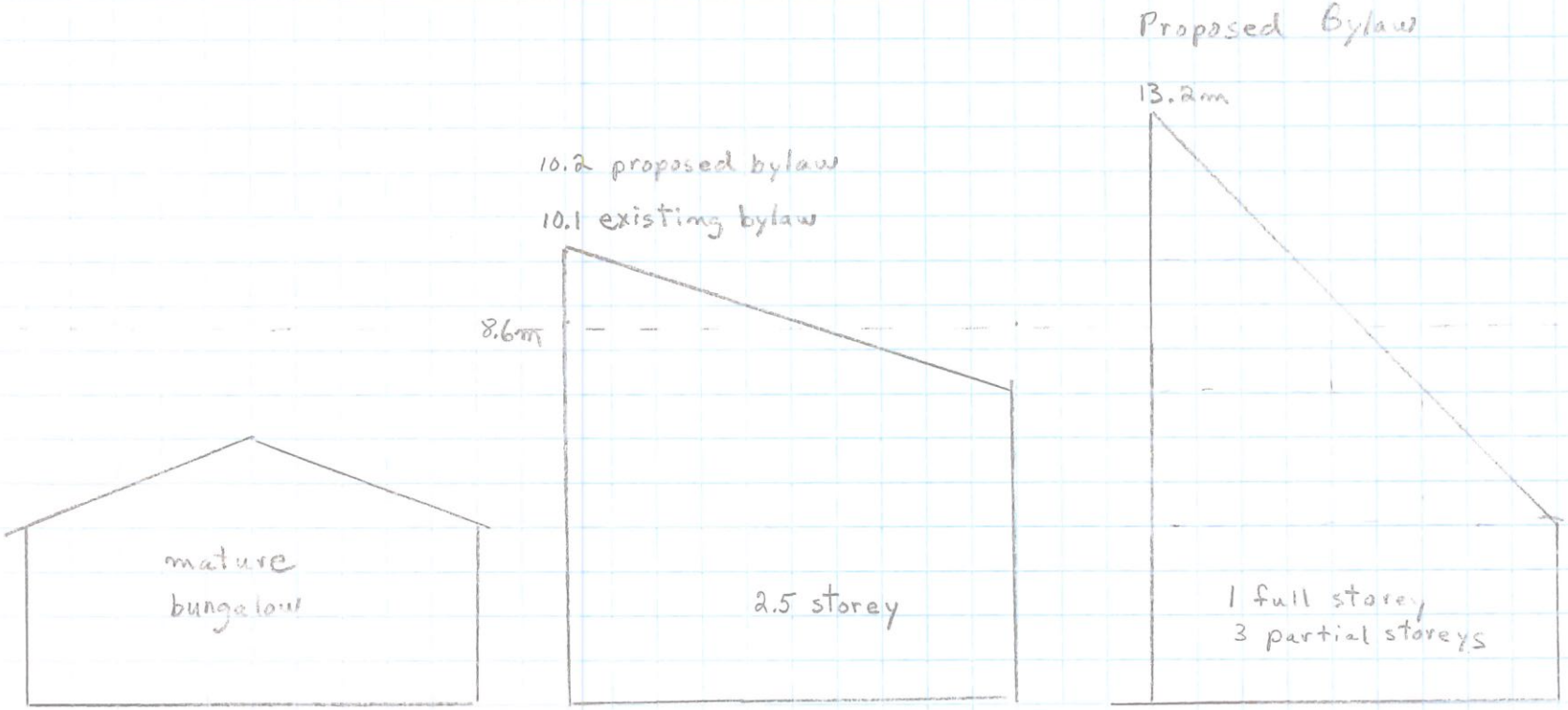

Figure 4C Mansard Roof of House in Mature Neighbourhood