

## CONTEXTUAL VOLUMETRIC AND MASSING PARAMETERS

### Executive Summary:

The need to control out of scale buildings within existing neighborhoods is a problem every community now faces. The applications which cause the most concern, especially with respect to neighbors, is when what are perceived to be oversized houses are squeezed into existing neighborhoods of smaller homes, which were developed at a time when maximizing the building envelope was not the main consideration.

The suggestions made herein are the result of much analysis of existing buildings and plans, and have been shown to have a positive effect on limiting size and scale in relation to neighboring houses. These were compared in particular to other approaches such as FAR and found to have a more positive, consistent and predictable impact. Three new dimensional controls are proposed:

- Ridge height limited to 28' or 1.25% of the prevailing ridge height of neighboring homes
- Eave height limited to 22' or 1.15% of the prevailing eave height of neighboring homes
- Sky Exposure plane restricting the encroachment of a new house beyond an angled plane established at a specific height, which limits the extent to which a building may impinge on upward views and block natural light

Added to the proposed Code's improved regulations on horizontal site coverage, the total dimensional controls amount to **context-based volume controls**: quantitative volume and massing controls on size in all dimensions and in relation to neighbors.

### Discussion:

While the FGEIS suggests the addition of a Floor Area Ratio to the proposed Code as a way of preventing overly-large homes being built within existing neighborhoods, we have found that limits on square footage contained within the building envelope do not affect its relationship with neighboring houses. These include floor area calculations by either Floor Area Ratio (FAR) or Lot Coverage methods. These can only provide the basis for a maximum permissible floor area on a lot, which is really a density control and not much more.

A form-based standard takes into account lot size and slope, plus a set maximum site coverage, building eave height and roof height, as well as minimum setbacks to property lines with no consideration of the scale of houses on neighboring lots.

The Land Use Committee (LUC) has determined that the only truly effective method is to control the envelope of a structure as it relates to existing structures within a set area.

Keeping in mind the goal to streamline the approval process and make predictable the bulk requirements for new housing and additions to existing housing, the LUC focused on providing the simplest means possible to provide a quantifiable relationship between existing and new development.

## Proposed Massing Controls:

The LUC has narrowed down the various possible relational controls on bulk to three parameters, which are described below.

### 1. Ridge Height -

If the proposed ridge height exceeds 28' above average grade of each elevation then the applicant may not exceed a maximum height determined by multiplying by 1.25 the average of existing ridge heights of houses whose lots fall within a 200' radius measured from the lot lines of the subject lot. Anomalies may be omitted at the discretion of the reviewing board. It should be noted that this should not be confused with building height, which is measured to the midpoint of a pitched roof or the top of structure on a flat roof.

### 2. Eave Height -

If the proposed eave height exceeds 22' above average grade of each elevation then the applicant may not exceed a maximum height determined by multiplying by 1.15 the average of existing eave heights of houses whose lots fall within a 200' radius measured from the lot lines of the subject lot. Anomalies may be omitted at the discretion of the reviewing board.

### 3. Sky Exposure Plane -

No part of a proposed structure may penetrate a plane determined by projecting a 45 degree angle taken from a height of 10' above a lot line, with the exception of chimneys and dormers 7'-0" or less in width, not to exceed a total aggregate width of 33% of the overall length of the building wall below that roof on which the dormers sit.

Since each of these three limits is relatively restrictive, it is acknowledged that there will sometimes be the need to modify the limits to accommodate a reasonable design which meets the intent of the Code, but cannot comply with the strict limits set forth above. To make these tools most effective, the Architectural and Historical Review Board (AHRB) will need to be empowered to allow for modifications to these limits, when to do so can be demonstrated to be consistent with the intent of the measures. For this to work, it has to be easier than requiring an applicant to file for a variance from the Zoning Board of Appeals, although that always remains as a possibility, in the event that the AHRB does not agree to a minor modification.

## Summary:

The default cut-off point of a 28' ridge height and a 22' eave height almost always allows for a modest 2-story house. If either of these heights is exceeded, then the applicant must measure the ridge and the eave of each house whose lot falls within the 200' radius to obtain the average. If the default cut-off point is not exceeded, the applicant may build without doing the calculations, as long as the structure does not penetrate the sky exposure plane.

Once the new building is complete, it becomes part of the 200' radius neighborhood. A new average set of heights now becomes the norm. Any new structure or modification of an existing structure can now be larger. The neighborhood can grow in a controlled incremental manner. The subject property is not included in the average at the time it is proposed, but is included in future calculations for other projects.

As a house is moved away from its lot line, the sky exposure plane affects less of its structure. While this can provide a solution on most lots, it should be noted that, the AHRB may need to apply discretion on 50 foot wide lots and narrower. However, with these tools, the AHRB can choose to allow the modification of a limit, if it determines that to do so will achieve the intent of a house contextually responsive to its neighbors. An example could be the AHRB allowing a house on a narrow lot to break the sky plane, if it was otherwise able to meet the limits on ridge and eaves.

We have reviewed the limitations and applied them to many varied conditions. We have not found them to be overly restrictive, since they affect mainly the building envelope and don't directly affect usable living space. While floor area is impacted, in that it may be restricted at the upper level, it can be relocated to the lower levels. As is intended, the neighborhood "hot button" applications for new construction were affected to the greatest extent in the most meaningful and appropriate ways. It should also be noted that we did not find this to be the case using an FAR, since the only restriction with the FAR is the floor area, which does not necessarily affect the massing or volume of the building in its relationship to neighboring properties.

The use of these parameters increases predictability and reduces otherwise subjective objections by Board members, working to assure a reasonable relationship between the proposed and its neighbors, from being seen as arbitrary or capricious. These massing controls make the guidelines quantifiable by establishing dimensions not to be exceeded. Applicants presenting projects that do exceed these quantified dimensions without success should not feel that something to which they were entitled has been taken from them. In contrast to the current Code, a prospective buyer or new lot owner, as well as an existing homeowner, can predict the outcome of the approval process. As always there can be flexibility in the application and it is recommended that the AHRB specifically be empowered to allow modifications to these massing controls, when doing so achieves the intent of assuring contextually responsible in-fill buildings.

There are no more easy-builds in the village and tear-downs in established neighborhoods are likely to become more prevalent at some point in the future. A context-based formula addresses these concerns and should set the expectations for applications well before the application reaches the AHRB. It is our hope and anticipation that this will help minimize the level of agitation and community unrest that is an almost everyday presence now with development in established neighborhoods, while simultaneously strengthening the character of those neighborhoods and allowing for incremental growth.

It is anticipated that these context-based formulae reflecting the Design Guidelines can simply be included in the Definitions Section of the proposed Code and added to the Dimensional Tables in Appendix B.