BOARD OF ZONING ADJUSTMENT
FOR THE DISTRICT OF COLUMBIA

Appeal of Kalorama Citizens Association from	)	
The Decision of DCRA Issuing Building Permits	)	
B455571 & B455876 Notwithstanding Non-	)	BZA No. 17109
Compliance of Plans with FAR, Height, ,and Setback	)	
Requirements with respect to 5-story Apartment in R-5-D	)	
Zone at 1819 Belmont Road (Square 251, Lot 45).	)	
	)	

Supplemental Report of Don A. Hawkins, Architect:
Submission of Appellant Kalorama Citizens Association

Elaboration of Observations on Roof Deck, Roof Structure, "Attic" and Basement, 1819 Belmont Road, N.W.

Introduction: In the course of my testimony on March 9, 2004, the Board requested that I provide additional explanatory material, particularly graphic material, further explaining my comments on the features of the building that are at issue in this appeal. During that testimony the Board also asked about the legal provisions on which my comments were based. I am pleased to respond to these requests by this Supplemental Report. This Report does not further address issues previously mentioned relating to the failure to submit drawings of the east and west elevations, the permissibility of the side wall windows, failure to include these windows in the building plans, or the roof access headroom.

Roof Deck and stairway to the roof: As can be seen from the section drawing at Exhibit 1 and the photograph at Exhibit 2, the roof deck and railing exceed the height limit of 70 feet, since the roof is 69 feet 9 3/8 inches high, the deck approximately 2 feet above the roof and the railing approximately 3 feet above the deck. The height limit is established by the Height of Buildings Act, in §6-601.05(c) and (e) (which limits the height on this street to the width of the street less 10 feet; the street width is 80 feet, calculated as the distance between the building lines). The roof deck does not qualify under the Height Act as a type of roof structure that may exceed the height limit, since roof decks are not included in the exhaustive list of such structures contained in §6-601.05(h) of the Act . The stair to the roof is not needed without the deck, and without the deck is not required by the BOCA construction code (12 DCMR §1027.1, attached as Exhibit 3).

Conclusion: The roof deck and railing should be eliminated. The roof structure with its stairway should be eliminated, for access to the roof for maintenance purposes could be provided by ladder from the lower roof or a hatch.

Roof structure: This roof structure is a penthouse enclosing a stairway. Under both the Zoning Regulations (§400.8), and arguably the Height Act (§6-601.05(h), although the exact language is "penthouses over elevator shafts"), it is therefore of a type that is allowed to exceed the maximum height. However, it must meet certain conditions. One condition is that it be set back from all exterior walls by a distance equal to its height (Zoning Regulations §400.7, Height Act §6-601.05(h)).

As is shown by the schematic building cross-section attached as Exhibit 4, this cannot be done in this instance because of the height of the roof structure (more than 11 feet 7 ½ inches above the roof surface, made higher because of its design in relation to the planned raised deck), when this height is applied to this narrow row house (16.67 feet in width). It sits directly on the east exterior wall and is set back only about 6 feet from the west exterior wall, both of which are face-on-line (lot line) walls rather than party walls (see Exhibit 4, A, B and C). These side walls are clearly exterior walls, because they rise the equivalent of one to three stories above the adjacent buildings, together comprise several

thousand square feet of wall surface exposed to the exterior elements, and moreover are equipped with numerous windows (see photograph, Exhibit 5).

Conclusion: The roof structure, especially since it will not be needed without the deck, should be eliminated as not being able to be in compliance, as currently designed, with the Height of Buildings Act or the Zoning Regulations.

Attic: By definition an attic is the space between the top of the ceiling joists of the uppermost story and the bottom of the roof rafters (see definitions, Exhibit 6). The only space shown on the drawings that conforms with the definition of an attic is the small sliver of space less than a foot high at the front of the house, indicated by "x" on Exhibit 1. Accordingly, the space immediately below it, labeled as the "attic" on the building plans, must not be an attic. The floor area of this purported attic space was excluded from gross floor area under Zoning Regulations §199.1, definition of "gross floor area", because it was incorrectly characterized as an attic. Since it is not an attic, is must be included in gross floor area in the calculation of FAR.

Additionally, under §199.1, in order to be excluded from gross floor area, an attic must have "structural headroom" (not "ceiling headroom as built") of less than six feet, six inches. The 6 foot 5 ¼ inch headroom of this level depicted on the plans is not structural, and thus even if it were an attic its floor area would have to be included in FAR. The ceiling joists are not structurally necessary for the strength or stability of the roof (see depiction of "attic" ceiling on Exhibits 1 and 4). In the back portion of the purported "attic", collar ties are indicated at 4'-0" on center. They are not performing any structurally necessary function and could be removed without weakening the structure in any way. Not being required, the ceiling joists could easily be removed by a future owner to achieve a higher space.

The structural headroom of this level of the building is the distance between its floor and the next structural members above the floor, namely, the roof rafters. This distance exceeds 6 feet 6 inches, as can be seen from Exhibit 1.

Conclusion: The purported "attic" is not an attic as per definition and appears to be a means of gaining living space, and its structural (as distinguished from ceiling) headroom exceeds 6 feet 6 inches. Therefore, its floor area must be counted in FAR.

Basement: The plans label the first level of the building "basement". The Zoning Regulations define "basement" as "that portion of a story partly below grade, the ceiling of which is four feet (4 ft.) or more above the adjacent finished grade"(§199.1). Basement floor area is included in gross floor area and FAR, under §199.1, definition of "gross floor area". The earlier set of drawings indicates a height of 7 feet-7 ½ inches from the basement slab to the first floor level, yielding a ceiling height of 7 feet 0 inches from slab to the first floor structure. The revised set, associated with the October 2003 permits, gives a dimension of 8'-2" from the basement slab to the first floor level. (I cannot see how that dimension could change, since the grade in front of the building is determined by the height of the public sidewalk, which has not changed.)

Should any of the basement floor area be excluded from FAR, and if so how much?

(1) The Basement floor level appears to be at least 6 inches above front grade, and for this reason alone it can be argued that the entire basement should be included in FAR, because its entire ceiling is more than four feet above the "adjacent finished grade" in front of the building.

(2) However, the developers have sought to exclude some of the basement floor area, presumably because the grade of the lot increases from front to rear, and because the basement, which does not extend all the way to the rear of the building, is not open at the rear. If that is to be done, the excludable portion should be calculated in such a way as to take into account the reasonably presumed actual grade of the entire perimeter of the building. This can be ascertained by drawing a diagonal line connecting the front and rear grades. The Grade Plane, or Average Grade Plane, is a horizontal line intersecting this diagonal line at its midpoint.

In fact the architect for the project drew the Average Grade Plane on one sheet of the original plans (see reduced copy at Exhibit 7; diagonal grade line not on original), with the result that the entire basement ceiling was then shown to be more than four feet above the Grade Plane, requiring all of the basement floor area to be included in FAR. This can also be seen from Exhibit 1, illustrating how the Grade Plane is arrived at in this case, as follows: The height of the measuring point of the rear grade above the basement floor, calculated with the dimensions given in the Drawings, is 6'-3 1/8". Add 6" for the drop to grade out front, draw a diagonal line connecting the front grade to the rear grade and then a horizontal line intersecting the diagonal line at its midpoint. This horizontal line is the Grade Plane. Measuring above this line, one finds that the entire basement ceiling is more than 4 feet above the Grade Plane as well as the diagonal grade line. (Increasing the steepness of the diagonal would at some point cause this to be no longer true, providing a rational basis for excluding a portion of the floor area from F.A.R.) **Conclusion:** the entire area called the Basement should be counted in the F.A.R. calculations because its enclosing walls all rise more than four feet above the Grade Plane.

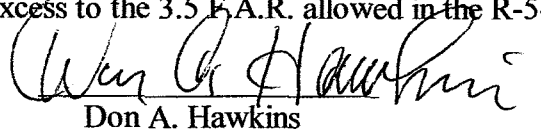
(3) In any event, the method employed in the F.A.R. calculations by the developer and by DCRA to determine the includable floor area of the basement is unacceptable because it is totally arbitrary. The calculation was done by first determining what percentage of the total perimeter of the basement consists of the length of the front bay wall of the basement. (The developers calculated this ratio to be 27.0 feet perimeter of the front bay wall divided by 131.4 total basement perimeter, or 20.5%, rounded to 20%), and then counting only that percentage of the total floor area of the basement in F.A.R. (see Exhibit 8). This method of calculation bears no relation to the actual grade, since it results in the includable floor area of the basement remaining constant regardless of the steepness of the actual grade.

Equally, it bears no rational relation to the actual length and resulting floor area of the basement. This is because as the length of the basement, and the total floor area, are increased, the length of the front segment of the perimeter will remain constant and the includable floor area will therefore increase at a much lower rate than the total floor area. (To illustrate: in a basement configured as a regular rectangle 44 feet by 16 feet, roughly the same dimensions as the present basement, the total square footage would be 704 SF. By the perimeter method, 27 feet of front perimeter divided by the total perimeter of 120 feet (44 x 2 plus 16 x 2) would result in a ratio of 23%. Multiplying this ratio by the 704 SF would result in an allowable 158.4 SF. But if the basement were twice as long, and thus twice as large, the perimeter method would increase the includable square footage by only 15%, as follows: for an area 88 feet by 16 feet, the total square footage would be 1,408 SF. Dividing the front perimeter of 27 feet by the total perimeter of 208 feet would result in a perimeter ratio of 13%. Multiplying this ratio by the 1,408 SF produces an allowable 182.77 SF, which is only 15% greater than that allowed for an area half the size.

Thus, the perimeter method has the obvious effect of arbitrarily diminishing gross floor area and awarding a developer higher density than the Regulations allow.

F.A.R. calculations: Allowable gross floor area as calculated by the developers is 7001.4 SF (3.5 F.A.R.), plus 470 SF for the roof structure, for a total of 7471 SF. If the full floor area of the Basement is included, as it should be, the F.A.R. increases to 3.78. If the floor area of the attic alone is included, it increases the F.A.R. to 3.84. If both attic and basement are included, F.A.R. is increased to 4.13, an excess of 18%.

Conclusion: the F.A.R. is in excess to the 3.5 F.A.R. allowed in the R-5-D zone.



Don A. Hawkins

CERTIFICATE OF SERVICE

I certify that the foregoing submission was served by United States Mail, postage prepaid, this 15th day of March, 2004 upon the following:

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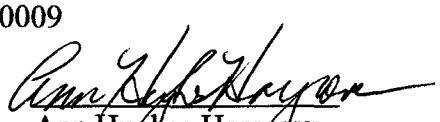

Ann Hughes Hargrove
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