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ANC 3F04

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March 12, 2003

Zoning Commissioners
441 4th Street, NW - Suite 200
Washington, DC 20001

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Re: Case No. 02-35 - Definitions of Building Height, Natural Grade
set for hearing on March 17, 2003

Dear Zoning Commissioners:

Writing as an individual commissioner, let me thank the Zoning Commission (ZC) for taking up one issue concerning measurement of building heights and opening up an opportunity for future examination of other, related issues.

This Case raises a narrow issue, concerning

(a) a minor amendment to the first paragraph of the definition of "**Building, Height of**" in 11 DCMR § 199 to clarify that definition and

(b) adding a definition of "Natural Grade" to that same section.[1/]

[1/] The Notice of Proposed Rulemaking (NOPR) proposes to add the underscored language to the first paragraph:

"**Building, height of -** the vertical distance measured from the level of the curb opposite the middle of the front of the building to the highest point of the roof or parapet. The term curb shall refer to the curb at grade. In the case of a property fronting on a street that is elevated above grade, the height of the building shall be measured from the lower of the natural grade or finished grade at the middle of the front of the building to the highest point of the roof or parapet."

The NOPR also proposes to add the following new definition:

"**Natural Grade** - the undisturbed ground level formed without human intervention or, where the undisturbed ground level cannot be ascertained because of an existing building or structure, the undisturbed existing grade."

The present definition uses "natural grade" in its fourth paragraph. See Appendix.

The word "grade" is not defined in §199, so, when it stands unmodified, it has the meaning or meanings given to it in *Webster's Unabridged Dictionary*. See 11 DCMR § 199.2(g).

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It also opens up the possibility of inviting a future rulemaking to examine some or all of the remaining five paragraphs of that Building Height definition in 11 DCMR §199 [see Appendix].

A. Narrow Issues

The NOPR refers to "a street that is elevated above grade" without definition. The ZC may intend to refer to viaducts, overpasses, or bridges. If so, best to say so. Some people may not consider a viaduct to be a street at all. A street that is "elevated" could mean a street built over raised fill: For example, parts of Connecticut Avenue in ANC 3F are "elevated" by landfill – rock and soil fill, over a century ago, to permit laying tracks for a trolley ("light rail") line. If one looks eastward from Connecticut, south of number 4545 (The Brandywine Apartments), one looks downward some three storeys (toward Appleton Street). If one looks eastward from behind the low-rise commercial buildings south of Albemarle Street, one looks down even deeper to Soapstone Creek as it flows out of a culvert on its way to Rock Creek. The proposed definition of "natural grade" might well mean that several storeys on the east side of Connecticut Avenue are above natural grade even though below the sidewalk. Similar situations occur elsewhere in Forest Hills where today's streets may lie on fill above old ravines and culverted streams (e.g., a portion of Davenport Street) or simply above old low-lying land. Much of Forest Hills and North Cleveland Park (like other parts of Wards 3, 4, 5, 7, and 8) is quite hilly, with some natural grades well above or below today's street levels. In some instances, grading has significantly lowered the original hill (e.g., Soapstone Mountain west of Connecticut and Albemarle).

B. Broader Issues under present Title 11

Turning past the specific rulemaking proposal, the Office of Planning usefully suggested a broader review of the definition of Building Height, as did ANC 3D.

1. *Amending second paragraph of definition.* The ZC would facilitate such review by setting down for public hearing a specific proposal either

(a) to delete the second paragraph of the definition, which indirectly allowed buildings taller than 40 feet in zoning districts ostensibly limited to 40 feet (without a rulemaking process to amend the provisions that prescribed 40 feet);[2/] or

(b) alternatively, to amend that second paragraph to read: "In those districts in which the height of the building is limited to forty feet (40 ft.), the height of the building shall ~~may~~ be measured from the lower of finished or existing grade level at the middle of the front

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[2/] The second paragraph reads: "In those districts in which the height of the building is limited to forty feet (40 ft.), the height of the building may be measured from the finished grade level at the middle of the front of the building to the ceiling of the top story." A 40-foot height limit applies in the R-1-A, R-1-B, R-2, R-3-, R-4, R-5-A zoning districts. 11 DCMR § 400.1.

of the building to the ~~ceiling of the top story~~ highest point of the roof or parapet. The term "existing grade level" shall refer to grade prior to preparation of a building permit application."

"Existing" grade seems a reasonably clear concept to apply in contrast to "finished" grade.

2. *Considering whether portions of "definition" belong outside of § 199.* The ZC would further facilitate such review by inviting public hearing comments on the question whether some paragraphs (such as the second paragraph) should be moved from a general "definition" and appear, instead, in other chapters dealing with specific zoning districts. See, e.g., 11 DCMR § 1534.2 (as to building height in the Naval Observatory Precinct District). One expects a general definition to apply to the entirety of Title 11 (Zoning Regulations).

C. Use of diagrams in zoning regulations

Fairfax County and other jurisdictions use diagrams ("worth a thousand words") embedded in their zoning regulations. The ZC tradition has been to use words only. Developing diagrams as part of the rule will help make DC zoning regulations more user-friendly and clearer to one and all.

Attached are four pages (A2-1 through A2-4) from "Appendix 2 - Illustrations" to the Fairfax County Zoning Ordinance.[3/] Illustration 1, "Angle of Bulk Plane" offers an attractive concept to ask OP to consider and evaluate for in-fill and tear-down construction in DC residential districts (to help assure that new construction placed relatively close to neighboring properties does not loom "over" them to the detriment of air, light, spaciousness, and sense of privacy). Illustration 2 concerns building height concepts.

Conclusion

Zoning regulations that would allow lower, less bulky buildings as of right in residential districts would help preserve DC's attractiveness to current inhabitants and future residents.

Faithfully,

David J. Bardin, ANC 3F04

Appendix: Present text of "Building, Height of -" Definitions in 11 DCMR § 199
Attachment: Fairfax County Zoning Ordinance, Appendix 2 - Illustrations

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3/ [www.co.fairfax.va.us/dpz/PDF_files/Ordinance/app2illustrations.pdf]

APPENDIX: Present text of "Building, Height of -" Definitions in 11 DCMR § 199

Building, height of - the vertical distance measured from the level of the curb opposite the middle of the front of the building to the highest point of the roof or parapet.

In those districts in which the height of building is limited to forty feet (40 ft.), the height of the building may be measured from the finished grade level at the middle of the front of the building to the ceiling of the top story.

In those districts in which the height of the building is limited to sixty feet (60 ft.), in the case of a building located upon a terrace, the height of the building may be measured from the top of the terrace to the highest point of the roof or parapet, but the allowance for terrace height shall not exceed five feet (5 ft.).

Where a building is removed from all lot lines by a distance equal to its proposed height above grade, the height of building shall be measured from the natural grade at the middle of the front of the building of the building to the highest point of the roof or parapet.

If a building fronts on more than one (1) street, any front may be used to determine the maximum height of the building; but the basis for the height of the building shall be determined by the width of the street selected as the front of the building.

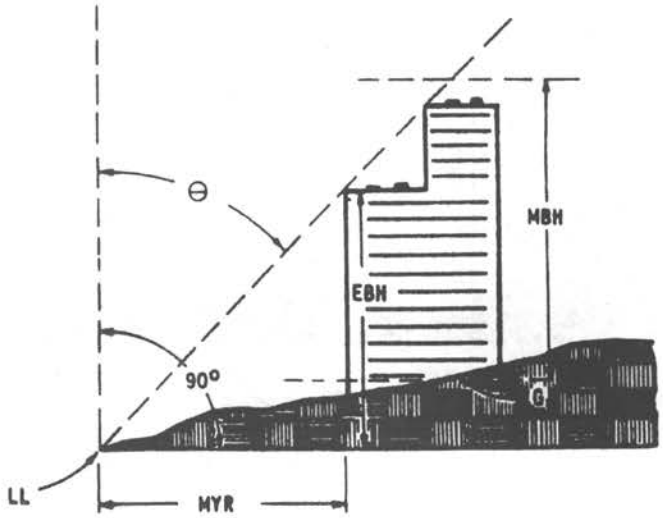
In those districts in which the heights of building is permitted to be ninety feet (90 ft.) or greater, the height of buildings shall be measured to the highest point of the roof excluding parapets not exceeding three feet (3 ft.) in height.

APPENDIX 2-ILLUSTRATIONS

ILLUSTRATION 1

ANGLE OF BULK PLANE

Plate 1



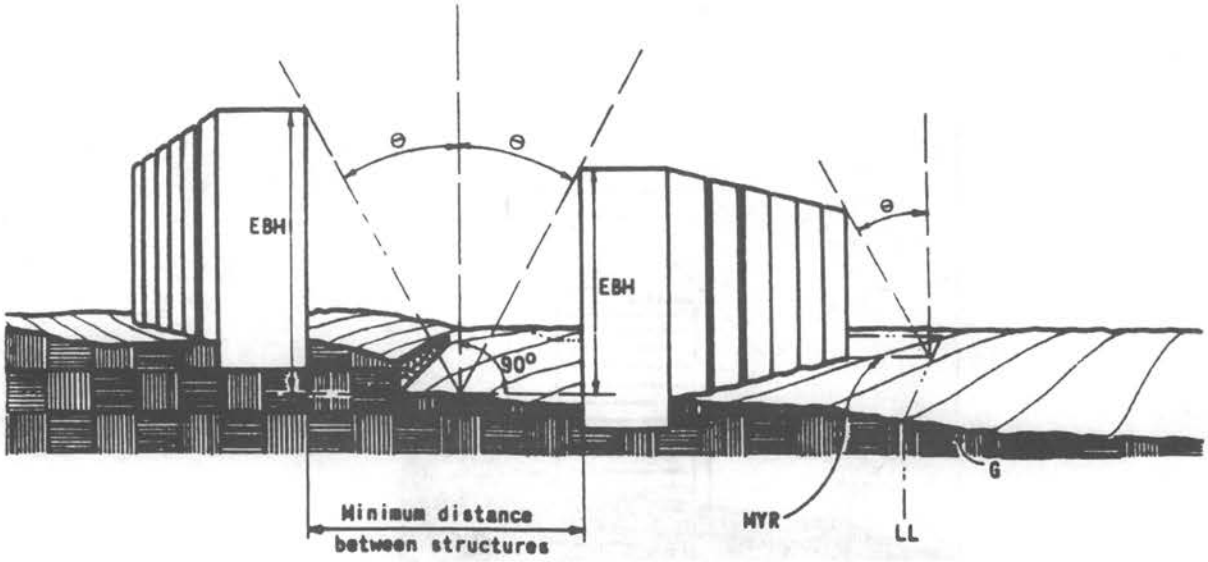
Θ : Angle of bulk plane
LL : Lot line
MYR : Minimum yard requirement
EBH : Effective building height
MBH : Maximum building height
G : Grade (finished)

$$MYR = EBH \tan \Theta$$

$$EBH = \frac{MYR}{\tan \Theta}$$

ILLUSTRATION I

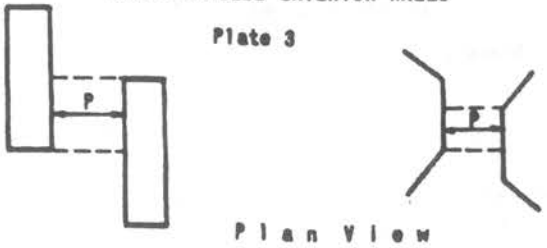
ANGLE OF BULK PLANE
Plate 2



Θ : Angle of bulk plane
LL : Lot line
MYR : Minimum yard requirement
EBH : Effective building height
G : Grade (finished)

PLANE OF MEASUREMENT (P) OF Θ FOR STRUCTURES
WITH PARALLEL EXTERIOR WALLS

Plate 3



Plan View

Note: For the convenience of the reader, Table 1, presented on the following page, sets forth the minimum yard requirements for given effective building heights at varying prescribed angles.

TABLE 1

MINIMUM YARD REQUIREMENTS

Effective Building Height *(feet)*

Angle of Bulk Plane (degrees)

	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200
5	1	1	2	2	3	3	3	4	4	5	5	6	6	7	7	7	8	8	9	9	10	10	10	11	11	12	12	13	13	14	14	14	15	15	16	16	17	17	17
10	2	3	4	4	5	6	7	8	9	10	11	11	12	13	14	15	16	17	18	19	19	20	21	22	23	24	25	26	26	27	28	29	30	31	32	33	34	34	35
15	3	4	5	7	8	9	11	12	13	15	16	17	19	20	21	23	24	25	27	28	29	31	32	33	35	36	38	39	40	42	43	44	46	47	48	50	51	52	54
20	4	5	7	9	11	13	15	16	18	20	22	24	25	27	29	31	33	35	36	38	40	42	44	45	47	49	51	53	55	56	58	60	62	64	66	67	69	71	73
25	5	7	9	12	14	16	19	21	23	26	28	30	33	35	37	40	42	44	47	49	51	54	56	58	61	63	65	68	70	72	75	77	79	82	84	86	89	91	93
30	6	9	12	14	17	20	23	26	29	32	35	38	40	43	46	49	52	55	58	61	64	66	69	72	75	78	81	84	87	89	92	95	98	101	104	107	110	113	115
35	7	11	14	18	21	25	28	32	35	39	42	46	49	53	56	60	63	67	70	74	77	81	84	88	91	95	98	102	105	109	112	116	119	123	126	130	133	137	140
40	8	13	17	21	25	29	34	38	42	46	50	55	59	63	67	71	76	80	84	88	92	96	101	105	109	113	117	122	126	130	134	138	143	147	151	155	159	164	168
45	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200
50	12	18	24	30	36	42	48	54	60	66	72	77	83	89	95	101	107	113	119	125	131	137	143	149	155	161	167	173	179	185	191	197	203	209	215	220	226	232	238
55	14	21	28	36	43	50	57	64	71	79	86	93	100	107	114	121	129	136	143	150	157	164	171	179	186	193	200	207	214	221	228	236	243	250	257	264	271	278	286
60	17	26	35	43	52	61	69	78	87	95	104	113	121	130	139	147	156	165	173	182	191	199	208	217	225	234	242	251	260	268	277	286	294	303	312	320	329	338	346
65	21	33	43	54	64	75	86	97	107	118	129	139	150	161	172	182	193	204	214	225	236	247	257	268	279	290	300	311	322	332	343	354	365	375	386	397	407	418	429

ILLUSTRATION 2

BUILDING HEIGHT

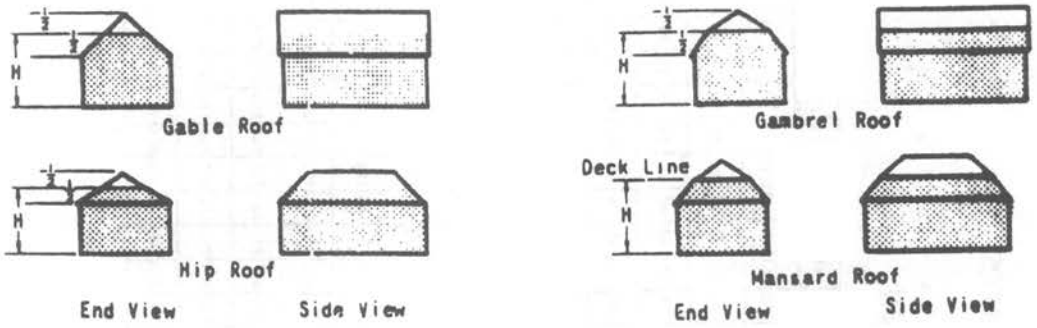
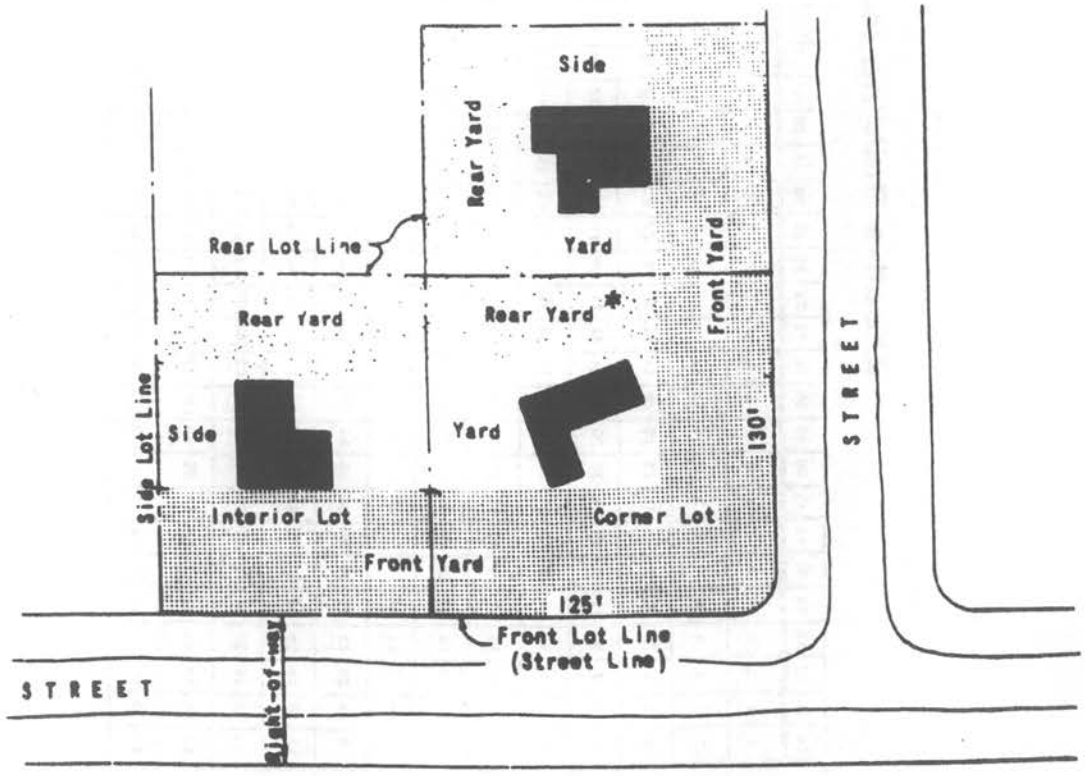


ILLUSTRATION 3

LOT LINES AND YARDS



*For single family detached dwellings in the R-E through R-8 districts the minimum required rear yard on a corner lot may equal but shall not be less than the minimum side yard requirement for the district.