GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF PLANNING

MEMORANDUM

TO: Zoning Commission

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DATE: September 15, 2008

SUBJECT: Recommendations Regarding Measurement and Regulation of Height
ZC #8-06-01

I. Overview of Zoning Review Process

This report considers general rules and recommendations applicable to the measurement of height in the Zoning Regulations. It is the third of approximately twenty subject area reports to come before the Zoning Commission (the Commission) as part of the zoning review process mandated by the 2006 Comprehensive Plan.

Regulations are currently being reviewed by policy subject areas. Public working groups discussions are centered on issues identified in the Comprehensive Plan and on potential conflicts within the Zoning Regulations. Recommend changes are then forwarded to the twenty-four member Taskforce for additional review and input. Finally, recommendations for each subject area will be available for public review including a hearing before the Zoning Commission. After the conclusion of public review for all subject areas, OP will work with the Office of the Attorney General to draft zoning language to reflect the proposed policy changes.

II. Context of the District's Regulation of Height

The height of buildings is of concern to cities throughout the world. Historically, height limits are based on the analysis of direct physical factors such as light, air, shadows, important views, or fire protections, and factors such as a city's goals, urban form, technology, traffic, infrastructure capacity, historic preservation, air quality, and sustainability. These factors are weighed and balanced against the returns that may come from permitting taller development on sites.

In the District of Columbia, this weighing and balancing of height concerns has not been done on a comprehensive basis since 1910. At that time, the 1910 Congressional Act to Regulate the Height of Buildings in the District of Columbia (Height Act or 1910 Height Act) was introduced to the Congress

by the Commissioners of the District of Columbia when the Congress functioned as the District's legislature. Since 1958, height in the District has been controlled by both the Height Act and the Zoning Regulations, where each property is governed by the more restrictive of the two.

The Height Act is similar to many other cities' late 19th and early 20th century ordinances that restricted height as part of ordinances mandating fireproof construction and otherwise reducing the risk of fire. The other cities' ordinances have changed significantly over the years in response to new social, economic or technological conditions. Washington's has remained essentially unchanged and has become a tool for promoting the federal goal of keeping Washington a primarily horizontal city, where the most prominent structures on the skyline are those housing functions expressive of civic or national values.

Accordingly, institutions and individuals who are concerned about building height have become very experienced in evaluating a limited range of height, how it should be measured, and where can it be exceeded by roof structures. However, the ambiguities, seeming contradictions, lack of definitions, and paucity of legislative record in both the Height Act and the Zoning Regulations make it difficult to gain certainty about many provisions.

The lack of a common understanding of concepts and rules has led to frequent misunderstandings among neighbors, developers and review agencies. A goal of the recommendations in this memo is to minimize conflicts and maximize coordination between the two regulations by formalizing and codifying the city's policies on height measurement within the Zoning Regulations as clearly and unambiguously as possible.

Sometimes the expertise gained from height discussions seems to be applied to reinforcing existing positions, and appears divorced from considerations of height's role in the larger functioning of the city. On a city-wide basis there can be considerable square footage devoted to residences, commerce, and socially oriented functions within the limited range of height measurement discussions germane to the regulations. The difference of one or two floors per building represents a significant portion of the District's tremendous physical and social needs. Two or three feet atop a roof can make a difference in a building's sustainability features and the roof's ability to be enjoyed by its residents or tenants.

Throughout the process of reviewing the height regulations, OP has considered recommendations in the context of the District's future growth and needs rather than from a predetermined set of interpretations. It has been apparent that the Height Act is ambiguous or open to interpretation in nearly every part. Only rarely is the meaning clear in the absence of clarifying legal or regulatory opinions. Based on the wide range of possible interpretations of the Height Act, it is easily possible to further the District's growth and development policies while maintaining the city's horizontal skyline and not violating the intent or letter of the Height Act.

It is in this context, as well as with the goal of clearly codifying height measurement policies in mind, that the recommendations in this memo should be read.

III. Height Subject Area Process

The review has been governed by the overall Zoning Review objectives of clarity, relevance, and ease of use. The Working Group review was guided by policies in the Comprehensive Plan, which acknowledge the importance of maintaining Washington's uniquely horizontal skyline while accommodating continued development, and growth.

The Height Working Group began meeting January 29, 2008 and consisted of a broad range of citizens; planning, zoning, legal and architectural professionals; ANC members; and representatives of government agencies. The group assisted OP in reviewing the current regulations, identifying and analyzing issues, and developing alternatives for resolution of the current issues, ambiguities and inconsistencies. Between January and March, the Group held five 2 to 2 ½ hour meetings and supplied OP with extensive analysis and comments, both directly and through the dedicated zoning review website. Much of the background information OP developed for the Working Group and Task Force is attached as appendices to this report. OP thanks the members of this working group and the Task Force for volunteering the time to share their ideas and offer their assistance.

This consultation process led to OP's preliminary recommendations for the subject area. These were sent to the Zoning Review Task Force 30-days prior to its March 2008 meeting, and posted on the zoning review website after that meeting. Revised recommendations were reviewed a second time by the Task Force on July 10, 2008, and again posted on the website afterwards. The August 2008 Public Hearing Notice advertised the July 10 recommendations, with modest revisions informed by the Task Force and website comments.

The draft language circulated in the Hearing Notice for September 25, 2008 and in this memo is meant to convey concepts and recommended policies. It is not intended to represent the exact language that will be adopted for the Zoning Regulations. The drafting of legally-sufficient zoning text will come only after the public review of the concepts is finished and the Zoning Commission has given its initial comments. After the September 25th public hearing OP will work with OAG to draft language that encapsulates concepts approved by the Zoning Commission. These will be considered by the Commission as either as a stand alone chapter or as part of the completed draft revision to the Zoning Regulations.

IV. Height Recommendations

The concepts dealing with height measurement fall into three topic areas. There are four recommendations for each of these topic areas, for a total of twelve recommendations. The pages noted below indicate the start of the section containing a particular recommendation.

A. THE RULES APPLICABLE TO DETERMINING A BUILDING'S MAXIMUM PERMITTED HEIGHT.
- Recommendation 1: Streets with multiple frontages----------page 5
- Recommendation 2: Streets fronting on open space----------page 8
- Recommendation 3: Business vs. Residence streets----------page 9
- Recommendation 4: Single vs. Multiple Buildings----------page 15

B. THE RULES APPLICABLE TO MEASURING A BUILDING'S HEIGHT
- Recommendation 5: Location of Bottom Measuring Point----------page 18
- Recommendation 6: Elevation of Bottom Measuring Point----------page 21
- Recommendation 7: Natural Grade----------page 22
- Recommendation 8: Top Measuring Point----------page 23

C. THE RULES GOVERNING THE TYPES OF STRUCTURES PERMITTED ABOVE A ROOF
- Recommendation 9: Structures Permitted Atop a Roof----------page 24
- Recommendation 10: Height, Width and Massing of Structures Atop a Roof----------page 30
- Recommendation 11: Roof Structure Setbacks----------page 33
- Recommendation 12: Exterior Walls----------page 35

Each policy recommendation is structured as follows:
- Existing Practice
- Issues
- Recommendation
- Analysis
- Public Comments and OP Response
- Related Issues.

IV. A. DETERMINING A BUILDING'S MAXIMUM PERMITTED HEIGHT

There are two controlling factors in the District for a building's maximum permitted height: the site's zoning and what is permitted on that site by the Height Act. The zoning limits on height will be maintained or set for each zone in the zoning review subject area for that zone.

Where the Zoning Regulations are silent or would allow more height than the Height Act, it is important to determine the maximum height that would be allowed based on the restrictions of the Height Act. This includes:

- Determining from which street a building may draw its permitted height and the width of that street.
- Determining whether that street is a "residence" street or a "business" street.

There are four recommendations in this section. They address:

1. Determining from which street a building may draw its permitted height when it has multiple frontages;
2. Determining from which street a building may draw its permitted height when it has frontage on public space;
3. Clarifying the definitions of business and residence streets;
4. Clarifying when structures constitute one building or multiple buildings.

IV. A. 1. Frontage on Multiple Streets

Existing Practice

A building draws its height from the width of the street on which it fronts. If a building fronts on more than one street it may choose any adjacent street - usually the widest one - for purposes of determining maximum allowed height. A corner building must choose the street that permits the greater height.

Issues

Currently, there is no definition of the term "fronts." This has sometimes been interpreted to mean any street frontage for the lot on which the building sits. It has also been interpreted to require a primary or secondary entrance in order to be determined a "front" of the building.

Recommendation A.1 (Recommendation 1)

Any street abutting a building's property line may be used to determine the maximum height allowable, based on the street's width, designation, and height restrictions imposed by this Chapter. There should be no requirement for the presence of an entrance to designate a building "front" or "face."

Analysis

This addresses how to determine from which street a building may draw its permitted height when the building faces multiple streets. It retains the basic principle that maximum permissible height should be related to the width of the widest street which a building faces. The existing term for making this distinction is "front," however, the term "front" is not defined in the Zoning Regulations. To avoid uncertainty, the proposal would substitute building "face" for "front" to account for larger buildings occupying multiple sides of a Square, where there may not be an obvious "front." The recommendation would continue to permit doors to be located where they best serve building needs and urban design objectives, rather having to be located in the building face used to determine the building's permitted height.

Comments and OP Response

- *Some Working Group members expressed concern about this concept to OP. They believe that that a building face can qualify as a building "front" for the purpose of determining the building height, only if that front contains a building entrance.*

OP disagrees with this interpretation and notes that it is not consistent with past and existing practice. In general, any side of a building that faces a street should continue to be considered a front, and in specific, a building should be able to use any of the streets it faces to determine maximum height regardless of entrances. This is only an issue where a building has multiple frontage at different elevations, but in these cases forcing a particular frontage on the property could have unintended consequences. Since most developers will not leave available height on the

table, the result of an entrance requirement is not that a building's height will be lowered to match the street with the best entrance, but that the entrance will be placed on the street that allows for the greatest height. This will not always provide the best design solution and certainly doesn't provide the option to design the best entrance for the site. It will also result in many conforming buildings becoming non-conforming.

- *Other comments have ranged from "the proposed change would add clarity and diminish manipulation" to "this Section does not propose to provide clarity; rather [it] sees to reverse a consistent and well-established interpretation of the Height Act."*

Related Issues

The concept needs to make clear that any street abutting and generally parallel to a building's property line may be used to determine the maximum allowable height. This would be consistent with the approach suggested in the following section for federal reservations or open space.

IV. A. 2. Buildings Confronting Federal Reservations or Open Space

Existing Practice

The Height Act permits a building that "confronts a public space or reservation formed at the intersection of two or more streets, avenues or highways, the course of which is not interrupted by said public space or reservation" to draw its maximum permitted height category from the widest street, avenue or highway.

Issues

There is no common understanding of the intent of the Height Act or the Zoning Regulations with respect to this provision. The regulation contains multiple undefined terms and concepts. It has not been clear whether, to avail itself of this provision: a) a building must be directly across from a reservation, or can be on an angle from a reservation; b) all or just part of the building must confront the reservation; c) the allowable height may be determined by i) adding the width of two rights of way with the same street name that flank a public space or reservation (e.g., 17th Street at Farragut Square, or "b" + "c" in Figure 1) or ii) considering a portion of the public space or reservation to be within the right of way of a street that is perpendicular to two sides of the reservation and parallel to it on a third [e.g., "f", "d" and "e" in Figure 1][1]; and d) whether the chosen street must be parallel to or merely abutting the public space or reservation.

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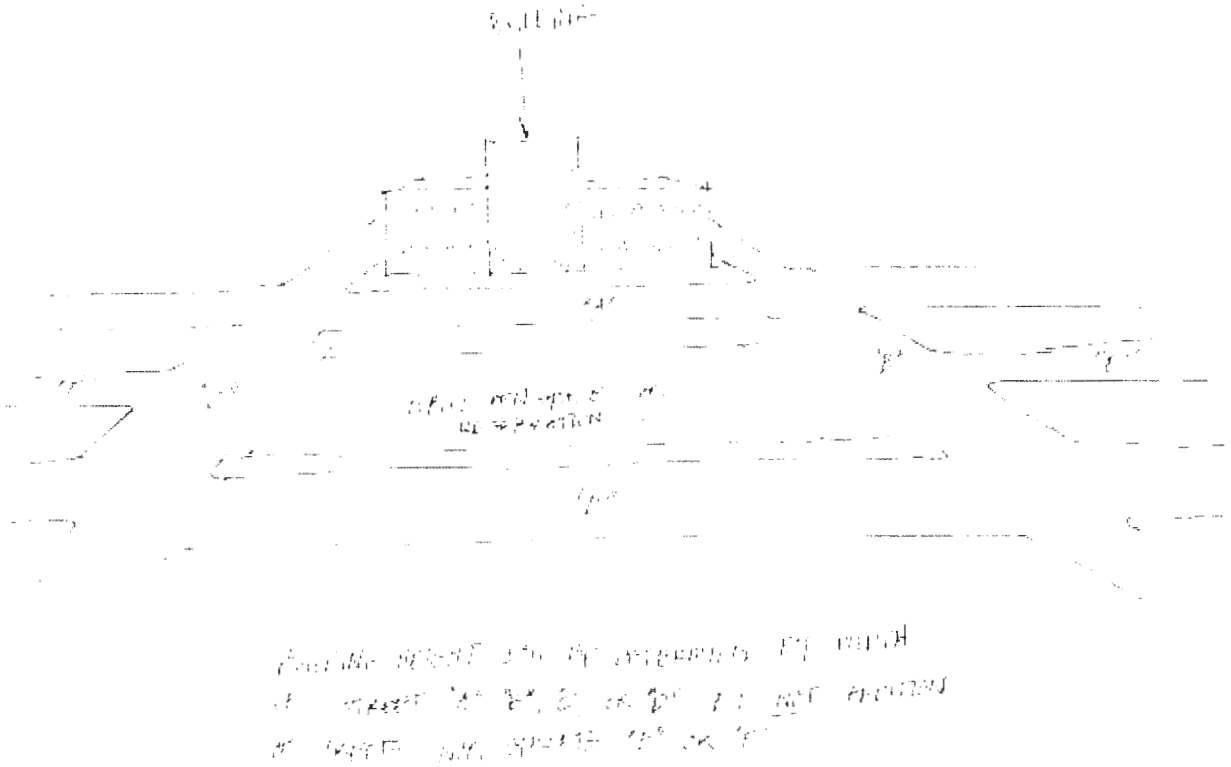
[1] [1] The court decision In *Techworld Development Corporation v. District of Columbia Preservation League*, 648 F. Supp. 106 (D.D.C. 1986) allowed the Techworld building at Mt. Vernon Square to determine height from a K Street, as its right of way in from of the building was interpreted to run from the south side of "D" in Ill. 1 to a line through the Square joining the north side of "B" to "E". However, the Techworld decision was ultimately vacated.

Recommendation A.2 (Recommendation 2)

When any portion of a building abuts a property line that is directly across a street from a public open space or reservation, the building's maximum allowable height may be determined by the width of any single right of way that is not divided by the public open space or reservation and that is adjacent and parallel to any single side of the open space or reservation (See Figure 1).

Figure 1



Analysis

The Zoning Regulations permit a building that "confronts a public space or reservation formed at the intersection of two or more streets, avenues or highways, the course of which is not interrupted by said public space or reservation" to draw its maximum permitted height category from the widest street, avenue or highway. The existing language is unclear and has been interpreted differently over the years. The proposed concept would clarify that a building may draw its height from any right of way that is parallel to the side of the open space or reservation on which the building has frontage. This would tie a building's maximum possible height to the width of a single right of way paralleling a side of the open space that the building confronts.

This issue sparked robust discussion among the Working Group. The group debated whether the intent of the Height Act was to allow maximum height on open space according to the same formula that wider streets allow taller buildings, or whether the strict wording of the Act was intended to result in shorter buildings on reservations was intentional.

Recommendation A.2 would clarify that: a) the building must be directly across from the public space or reservation; b) the width classification may be drawn from only one right of way that is parallel and adjacent to the public space or reservation; c) right of way widths may not be added together even if the rights of way have the same street name; and, d) if any part of a building meets these qualifications, then the permitted height applies to all of the building. The recommendation reflects the preferences of the Height Working Group and the National Capital Planning Commission (NCPC) staff.

Comments and OP Response

- *There has been resistance to this concept from the development community. It has been noted that, to determine maximum relative height, courts have indicated that the existing language does not always prohibit determining street width for zoning purposes by: adding the rights of way of same-name streets on two sides of a reservation or open space; by defining a street's right of way as the distance between the outer limit of a road parallel to a square and the farthest limit of the road with the same name that is perpendicular to the open space, and on a different side of the open space than the parallel road (i.e. from the bottom of "D" to the top of "E" or "F" in the diagram above); or drawing height from a wide street that is* diagonally *across from a park or open space. Precedents such as rulings on the Techworld (vacated) and the Warner Theater building developments have been cited.*

- OP's recommendation would make building height on a public space or reservation more consistent with the principal that there should be a positive correlation between the width of the road and public space abutting a building, and the building's permitted height. Applying the alternative would mean, for instance, that same-name flanking streets on the east and west sides of Farragut and McPherson would incorporate federal reservation space into the determination of rights of way, and that flanking streets on the north and south would not. On Mt. Vernon Square, the flanking streets on the south would incorporate federal reservation space into the street's right of way because, according to the court's ruling, K Street's right of way includes the southern half of the Square between 7th and 9th Street. On circles, the determining right of way could be chosen from an abutting street or avenue, or from the right of way surrounding the circle.

OP understands that this issue in the Height Act is open to interpretation and has offered a recommendation to clarify the issue for the purposes of the Zoning Regulations based on Working Group input. The most important outcome, whatever the resulting opinion, will be a common understanding that is clearly codified in the Zoning Regulations.

IV. A. 3. Residence Streets and Business Streets

Existing Practice

The Height Act provides for different height standards depending on whether a building is on a "business street" or a "residence street." The default formula for maximum permissible building height in the District is the width of a street right of way plus 20 feet. However, buildings on "residence streets" may not rise higher than 90 feet, regardless of the residential zone or the width of the street. This concept was necessarily carried into the Zoning Regulations in the existing Section 2511 and defined. In the case of rights-of-way less than 70' a residential building is limited to 50' maximum.

Issues

The definition in Section 2511 is unclear. In the Zoning Regulations, "business streets" are defined to mean "those sides and portions of any street" located in a Special Purpose, Waterfront, Mixed Use, Commercial, or Industrial District. While not officially interpreted anywhere, "sides and portions of any street" has for years been interpreted to apply separately to each and every individual property. This means that where a commercially-zoned building abuts a residentially-zoned building on the same street, the former is on a "business street" and the latter is on a "residence street." A property rezoned from residential to commercial would change the street designation applied to that property. Surrounding properties would remain the same.

The practical impact of the existing interpretation is that, as a matter of right, even for streets wider than 70 feet, the height of residentially zoned buildings may not exceed ninety feet, regardless of street widths, transit accessibility or the intensity of the zone district. While the concept prevents buildings in residentially zoned areas from exceeding 90 feet in height, it does not always protect primarily residential blocks from the intrusion of commercially-zoned buildings higher than 90 feet. Additionally, if a residential building is on a street wider than 70 feet it may rise higher than 90 feet if the Zoning Commission grants the property a PUD-related commercial zoning with a height limit above 90 feet.

Recommendation A.3 (Recommendation 3)

A "Residence street" would be any block face that contains any residential property located in a low to moderate density zone district, as those zones may be described after completion of the zoning review process, or any block face entirely made up of properties of any existing residential zone.

A "Business street" would mean any other block face. As with Recommendation A.1, a property adjacent to both a commercial and a residence street could choose its frontage and utilize the greater of the zones' permitted heights. (See Figure 2 below).

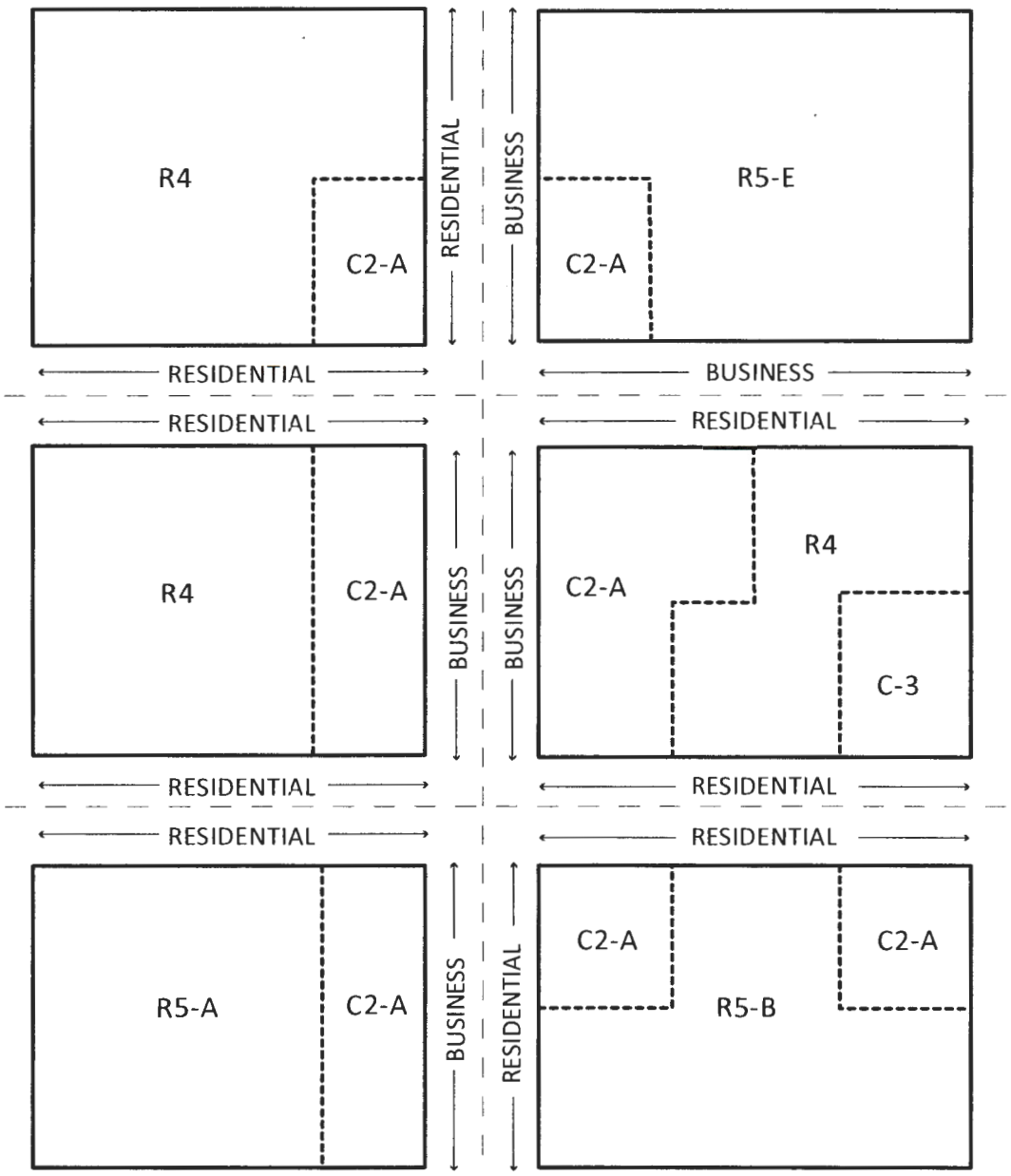


Figure 2

Analysis

This is the only section of the Height Act that determines a building's maximum permitted height by considering the type of uses on a street in addition to the more typical consideration of the street's right

of way width. This language seems to indicate that the authors anticipated that the designation would be made by street rather than by building. In other words, commercial buildings on residential streets would be limited to "residence" maximum heights and residential buildings on business streets might be allowed "business" maximum heights. While clearly an entire street (e.g. Connecticut Avenue) cannot be deemed to be only "residence" or "business," the Working Group was of the opinion that more protection was intended than simply a building-by-building designation. The proposed recommendation offers a middle ground.

The traditional interpretation has the advantage of flexibility in allowing maximum height under the Height Act to change by property, based on the zoning category. However, the advantage of regulating by block frontage is threefold. First, it would provide consistency in maximum height by block even where the zoning changes. Second, it would provide further protection of existing lower scale residential development from potentially extreme changes in height associated with PUDs or re-zonings. Finally, for areas of the city where more residential height may be appropriate and where street rights of way are greater than 70 feet, it would allow the Zoning Commission to craft new zones that would be primarily, but not exclusively, residential and permit buildings to rise more than 90 feet.

If a block were zoned entirely for residences, regardless of density, it would be considered a residential street. Streets that include medium and high density residential zones, but that are not exclusively so-zoned and used, could be designated as business streets. However, the existing zoning heights on such streets would not change unless it was explicitly approved by the Zoning Commission. Therefore, existing medium and high density residential areas would still be limited by the 60 or 90 foot zoning height limits in place now. Since the commercial properties adjacent to these areas are already deemed to be on business streets under the current practice, there should be no additional height impact on these areas. With a few exceptions, the denser apartment building zones tend to be closer to the downtown area, or C and SP zones where a large number of commercial properties are already developed or slated. Defining a street with any medium or high density property as a "residence street" would limit the existing development rights of a large number of commercial properties.

Blue-outlined Squares in the following Figure 3 are those where, if a right of way is greater than 70', low to moderate density residences are most at risk from height intrusions under the existing regulations. Each Square contains both low to moderate density residential zones (R-1 through R-5-B) and medium to high density commercial or mixed use zones (C-3-C, C-4, C-5, CR, SP-1, SP-2.). Currently each property on the block-fronts of these Squares is judged separately for business or residence street designation. The recommended approach to residence streets would mean presence of any low to moderate density residential zones on a block face would categorize that street as a residence street, and would preclude a new building facing the same block face from rising above 90 feet. Assuming right of way widths of at least 70', this would protect the approximately 45 blue-outlined Squares. Twenty-six of these Squares are in the central portion of the District, north of Eye Street and South of U Street, where the pressure for new construction or additions is greatest.

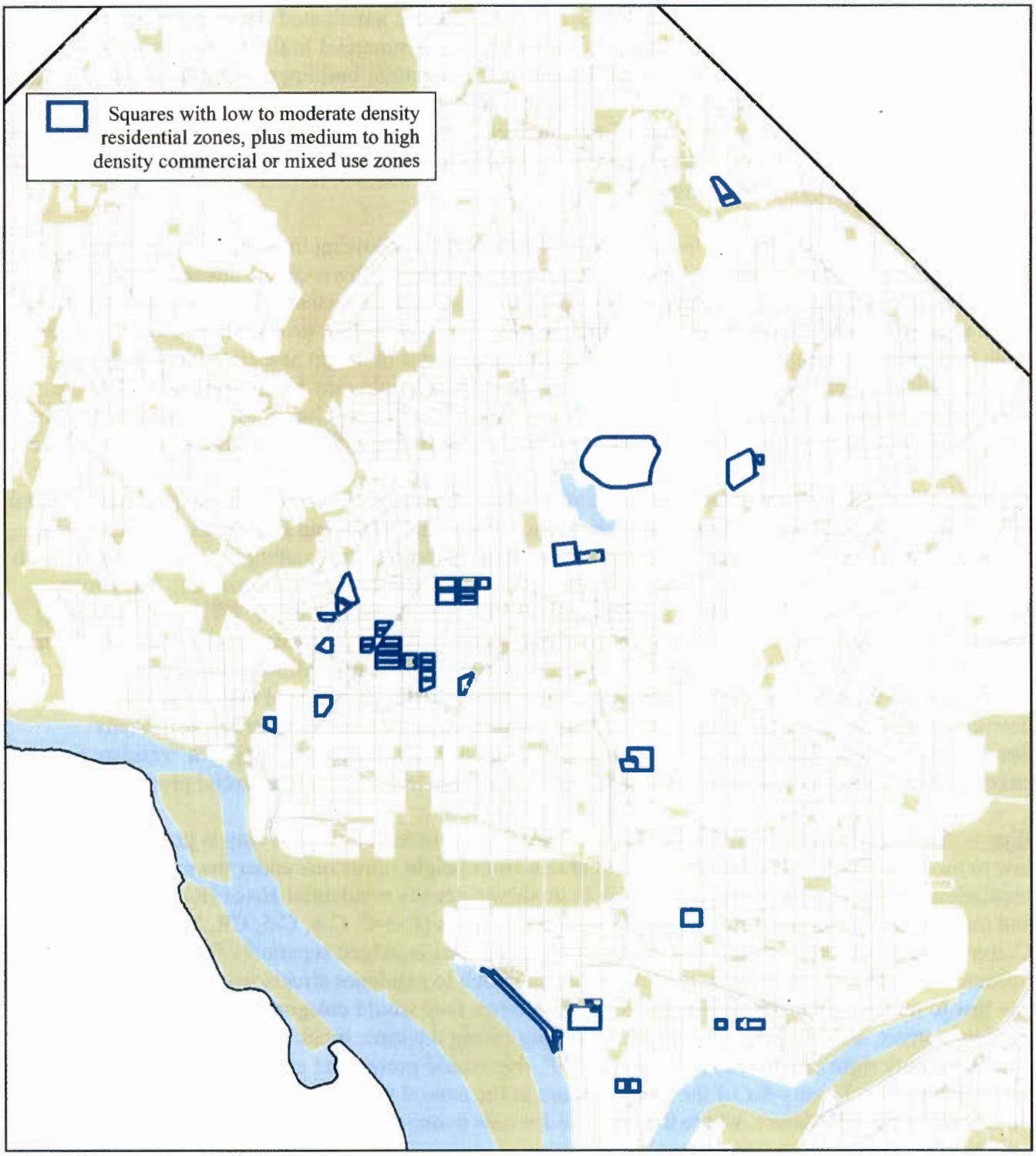

Squares with low to moderate density residential zones, plus medium to high density commercial or mixed use zones

Figure 3.

Comments and OP Response

- *The biggest concern about this issue has been whether the Zoning Commission has the right to define or interpret terms in the Height Act – terms such as Residence Street and Business Street. As stated above, the authority to interpret the Height Act lies with the Zoning Administrator.*

  In 1958 the Commissioners incorporated the current concepts of residence and business streets into the Zoning Regulations. § 2511.11 interprets "business street" to mean "those sides and portions of any street located in a Special Purpose, Waterfront, Mixed Use, Commercial, or Industrial District." Even if the existing definition were to be retained, the Regulations need to be further defined to clarify what is meant by "sides and portions of any street."

- *The concept would increase the height of apartment building zones.*

  Describing the street classifications would do nothing to increase height. This recommendation would not include any changes to the maximum height permitted in any residential zone. Until and unless detailed studies and discussions indicate that permitting increased heights in these or similar zones would be appropriate, this concept would do nothing more than clarify that street designations are by block face rather than by property for the purpose of zoning regulations.

  The concept would, however, preclude future buildings higher than 90 feet on a block face containing any low or moderate density residentially zoned properties.

- *Commercially zoned properties would be overly restricted by limiting height to ninety feet on any block-face that has a low to moderate density- zoned property.*

  OP's examination of zone district maps does not suggest this would be the case. There are very few areas where zone districts that permit height to exceed 90 feet now abut low or moderate density residential districts.

- *OP has not clearly explained how the concept would add protection to low and moderate density neighborhoods. Implementing the concept would covertly up-zone areas by permitting residential buildings to rise higher than 90 feet on block faces with medium to high density zoning; It could have a "potentially devastating" impact on R5-zoned row house blocks, of which there are many in former urban renewal areas or the former paths of freeways that were not built.*

  First, the row house area themselves are, by definition in the Comprehensive Plan, moderate density areas. These are exactly the areas that would be considered residence streets. Second, the major height control for all residential areas would continue to be zoning. Even for apartment building areas, the concept would do nothing to change the existing zoning controls on height. It would provide additional height protections for all low and moderate density zone districts while having little effect on medium and high density residential districts.

- *The concept of considering a street as a block-face on one side of a street centerline runs counter to the common sense interpretation of a residential street, and twists the intentions of the Height Act; a street should be defined, for zoning purposes, as the length of a block's right of way on both sides of a common centerline, rather than as a block-face of a single side.*

  While common sense may or may not indicate a similar treatment for both sides of a street, this runs counter to how our city has developed historically. Throughout and immediately outside of the L'Enfant city there are many instances of different zoning districts, building heights or building uses on opposite sides of the same right of way.

- *The current practice is to classify the nature of a street by the way a block face on one side of the street centerline is zoned – property-by-property. For instance, if part of block face were zoned commercial and part residential, then the properties zoned commercial were deemed to front on a business street and the properties zoned residential were deemed to front on a residence street. I don't see any basis for reinterpreting the Act to say that, if any part of a block front is zoned in an R-4 or more restrictive district, then the entire block front, on both sides and regardless of zoning, is considered to be a residence street.*

  The comment's description of existing practices is correct. It misinterprets the recommendation. The block front on only one side of a street centerline would be considered a residence if it has any low or moderate density residential zoning. The basis for the proposed change is laid out in the analysis section above.

- *Why have R-5 Districts been excluded from this section? Wasn't it the height of a new high-rise apartment building that prompted the passage of the Height Act in the first place?*

  When the 160' high Cairo Hotel was erected, the other buildings on that block front were townhouses. The properties were not yet zoned. Had zoning and the proposed recommendation be in place then, the Cairo would not have been able to be higher than 90 feet because the moderate density zoning would have made the street a residence street. The presence of any low or moderate density residential zoning would limit any building on the block face to a 90' maximum. Higher density zones would still be limited by zoning height limits.

- *It is inappropriate to base residence street classification on relative density since the R-1 through R-4 zones are described by use type and building type, not by density.*

  The proposal would rely on the Comprehensive Plan distinction of density which identifies single family structures as low density and row structures as moderate density. This recommendation would apply to those areas and be implemented through the zone districts created or amended through the Zoning Review process. . As used in this discussion the phrase "low and moderate density zone district" is a placeholder until the review of specific types of zones is complete, and the phrase is able to refer to specific zone that emerge from the zoning review.

Other Issues

As noted, appropriate height limits in zone districts or overlays will be considered in later stages of the zoning review process.

IV. A. 4. Single vs. Multiple Buildings

Existing Practice

A building is defined in the existing regulations as:

> *A structure having a roof supported by columns or walls for the shelter, support, or enclosure of persons, animals, or chattel. When separated from the ground up or from the lowest floor up, each portion shall be deemed a separate building, except as provided elsewhere in this title. The existence of communication between separate portions of a structure below the main floor shall not be construed as making the structure one building (11DCMR, § 199).*

The first sentence of this definition is actually the definition of a building. The second and third sentences attempt to tackle the issue of when a structure is a single building and when it is multiple buildings. Currently, the line between the two is fluid and dependent on the case at hand.

Issues

Over the past few years the determination of what constitutes a single building for zoning purposes has hinged on the concept of a "meaningful connection." This has generally been interpreted to mean that some above ground interrelatedness is required, but often only in token fashion. In some instances, a covered walkway has served to combine two structures into one building for zoning purposes. Often two buildings are combined into one building by a single locked doorway.

Recommendation A.4 (Recommendation 4)

A "building" is a structure having a roof supported by columns or walls for the shelter, support, or enclosure of persons, animals, or tangible property. When separated from the ground up or from the lowest floor up by common division walls, each separate portion shall be deemed a separate building unless there is open access between all portions on at least half of the shared floors. Two or more structures that are in all other respects physically separate from each other can not be combined to form a single building through the introduction of any type of physical connection between the structures, including a trellis, walkway, garage or tunnel, at any location.

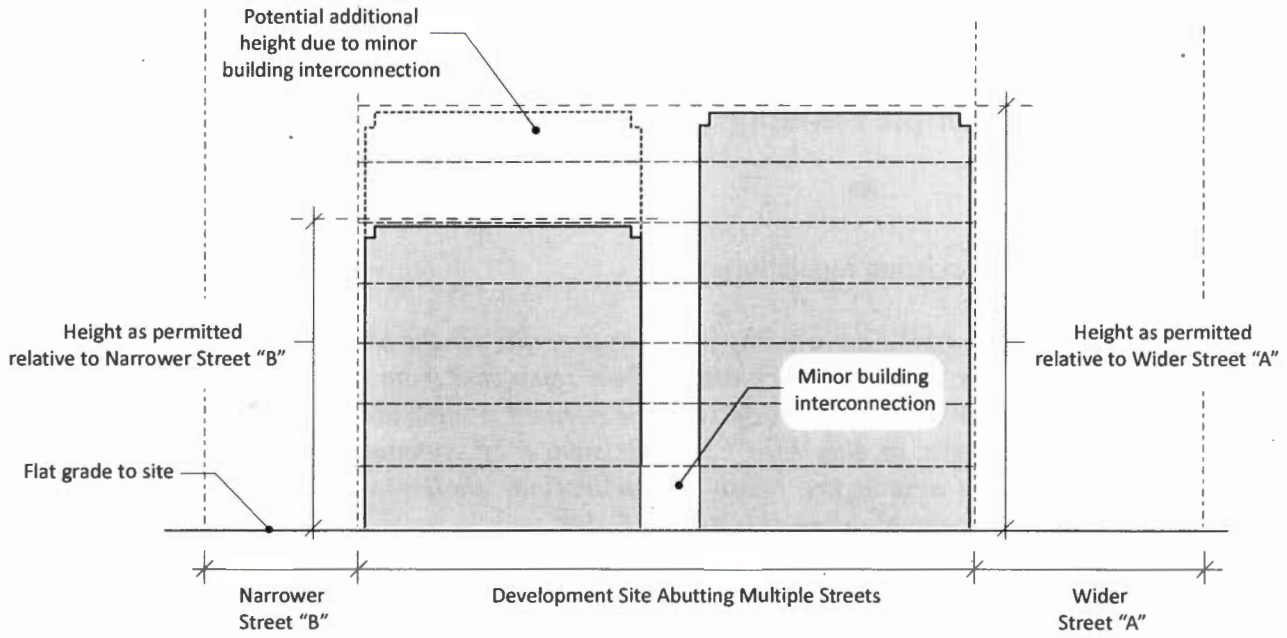


Figure 4

Analysis

The maximum height a building may achieve is usually related to the width of a street on which the building has frontage. Where a building is on a site that is bounded by streets permitting different building heights (Figure 4), there is an economic incentive to presenting a structure as part of a building having frontage on the street permitting the greatest height. This has led to seemingly separate buildings being configured to appear as one with a building having frontage on the widest street.

In the above figure, assuming a Square has uniform zoning, the building on Street A could rise to 130 feet, but a building on Street B could rise to only 90 feet. However, by "attaching" the two buildings so that they could be considered one building, the building on Street B could also rise to 130 feet. Conceivably there could be a series of attachments that would let all building construction with frontage on Street B pull its maximum height from the building face on Street A.

The Commission has made it clear that such connections must be "meaningful" and above-grade. While this has precluded connections through below-grade parking garages, there has been uncertainty about whether multiple towers rising from a common above-ground podium are separate buildings or one single building, and whether relatively minor connections such as single story corridors or even open-air arcades will be considered meaningful enough to be considered one building.

This has led the Zoning Commission to become more demanding when considering the sufficiency of these connections, and has led OP to develop a more clearly defined concept of what constitutes a single building. It emphasizes the sharing of a certain percentage of floors.

Comments and OP Response

- *Comments have been generally positive on this concept, especially on the floor plate sharing.*

- *The most common concern relates to the sharing of mechanical systems. There have been questions about whether using decentralized systems in larger buildings might lead to greater efficiency; and whether – when an addition to an existing building is constructed – it must interconnect with all of the existing structure's systems to be considered part of a single building.*

  In response to these concerns, OP has removed the recommendation that a single building must share mechanical systems throughout. The recommendation now only includes floor plate connections.

- *There is also concern that the proposed language would have the unintended consequence of preventing mixed use buildings. In order to share floorplates throughout the structure, a large building would likely be built with only one use, such as office, at the expense of a second use like residential.*

  This is an important concern. If an office and residential structure next to each other are deemed two buildings and do not have equal frontages, one may be forced to be shorter than if it was combined with the other. This situation could prompt developers to build a large single-use structure instead of two structures of different uses.

IV. B. MEASURING A BUILDING

Whether building height is limited by the zoning district or the Height Act, the height has to be measured and the rules for measurement should be clear.

In general, the existing regulations for height measurement can be summarized as:

- General starting point of measurement is the curb opposite the middle of the front of building

- Measuring in Specific Zones and Heights
  Zones of ≤ 40': Finished grade at the middle of the front of a building to the ceiling of the top story
  Zones of ≤ 60' with a terrace of ≤5': measure from top of terrace to highest point of roof
  Zones of ≥ 90': measure to highest point of roof, excluding parapets ≤ 3'

There are several concepts that need to be clarified or simplified. There are four recommendations in this section. The first two deal with determining the bottom measuring point. The third defines natural grade. The final recommendation clarifies the top measuring point.

IV.B 1. Location of Bottom Measuring Point

Existing Practice

For buildings that have frontage on more than one street, a building's height may be drawn from "the street that permits of the greater height." The District has traditionally permitted a building to determine its allowed height based on one of those streets and the point from which that height is measured to be on another of those streets. Court and Office of the Attorney General opinions have reinforced this tradition. This practice has permitted larger buildings with multiple frontages to rise higher than would otherwise be permitted on some streets.

Issues

The Working Group has asked for greater clarity and predictability determining a building's maximum allowed height.

Recommendation B.1 (Recommendation 5)

Clarify the determination of the measuring point for building height when a building faces more than one street. Option 1: The street chosen to determine the maximum allowable height must also be used to determine the point from which building height is measured. Option 2: Any abutting street which a building faces may be used to determine the measuring point regardless of which abutting street is used to determine maximum allowable height.

Analysis

Since the Height Act separates the sections for determining allowed height and determining the measuring point, it can easily be read that these have no relation and can be considered in isolation. However, this existing system is counterintuitive and often difficult ~~for laypeople~~ to understand. Whether the existing interpretation is kept or modified, it is important that the method for determining the measuring point is clearly delineated in the regulations.

Clearly, the Act anticipates that a building on a corner or through lot with two frontages could result in a building that is higher on one of those frontages that would otherwise be allowed. However, separating height determination and measuring point allows, in some cases, a building to be higher on *both* frontages than would otherwise be allowed on either one (See Figure 5).

Option 1 would require both the maximum permitted height and the measuring point to be taken from the same street ensuring that at height on at least one frontage is based on the street width. Option 2 would maintain the long-time existing practice of permitting precedent of over 50 years that would allow measuring point and permitted height to be determined by different streets. It reflects official 50 years of precedent and opinions of the District's Corporation Counsel/Attorney General Either policy would need to be written clearly and consistently in the regulations.

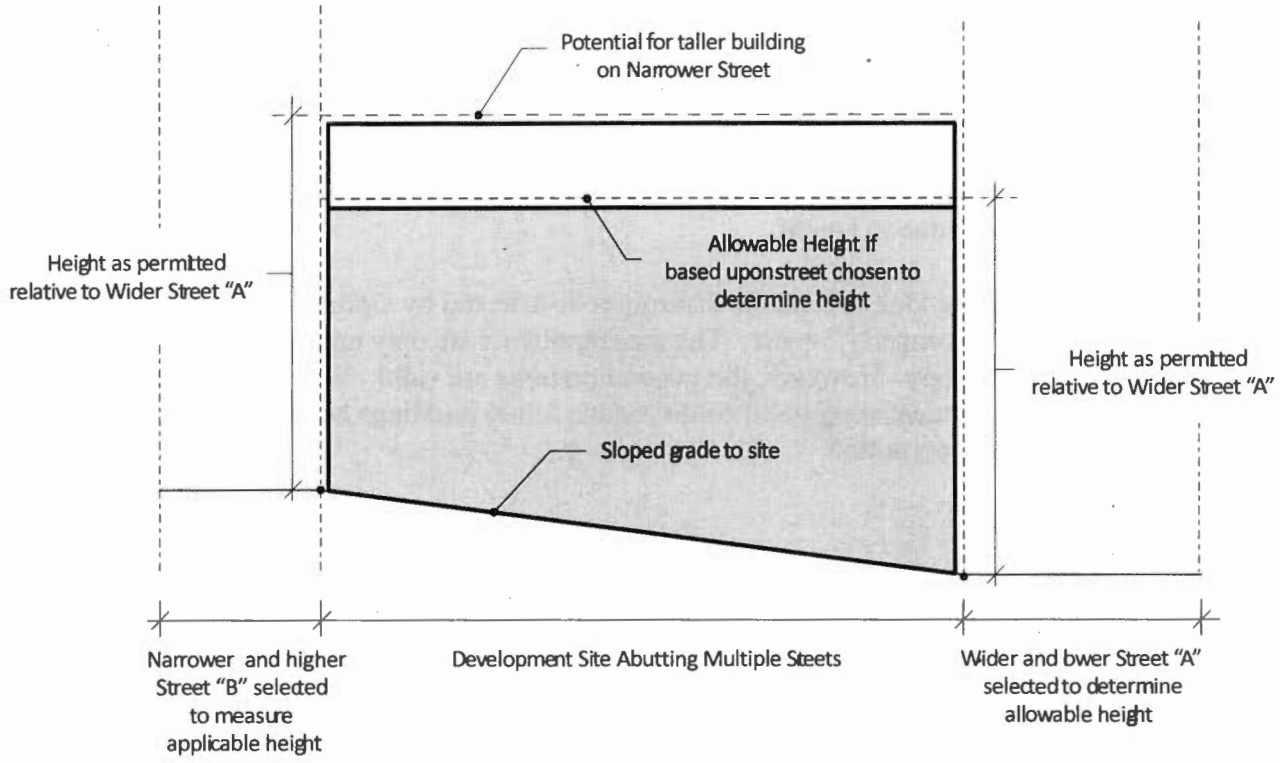


Figure 5

Comments and OP Response

- *The existing measuring method has been favorably viewed by the development community and, until recently by federal review agencies,*
- *It has been of concern to some citizens when the situation occurred next to residential areas.*
- *Option 1 is not controversial with the latter groups, but is of considerable concern to the development community.*
- *They development community has stated that:*
  - *Several court decisions and Corporation Counsel / OAG opinions have endorsed the traditional practice (Option 2);*
  - *Land values and purchase prices have been based on the square footage that is possible with the existing practice, rather than on the reduced square footage that would result from the proposed concept. This may diminish property values.*
  - *There is no justification for making an implicit distinction between through block buildings with different elevations on each block-front, and buildings that run between a street front and an alley with different elevations.*

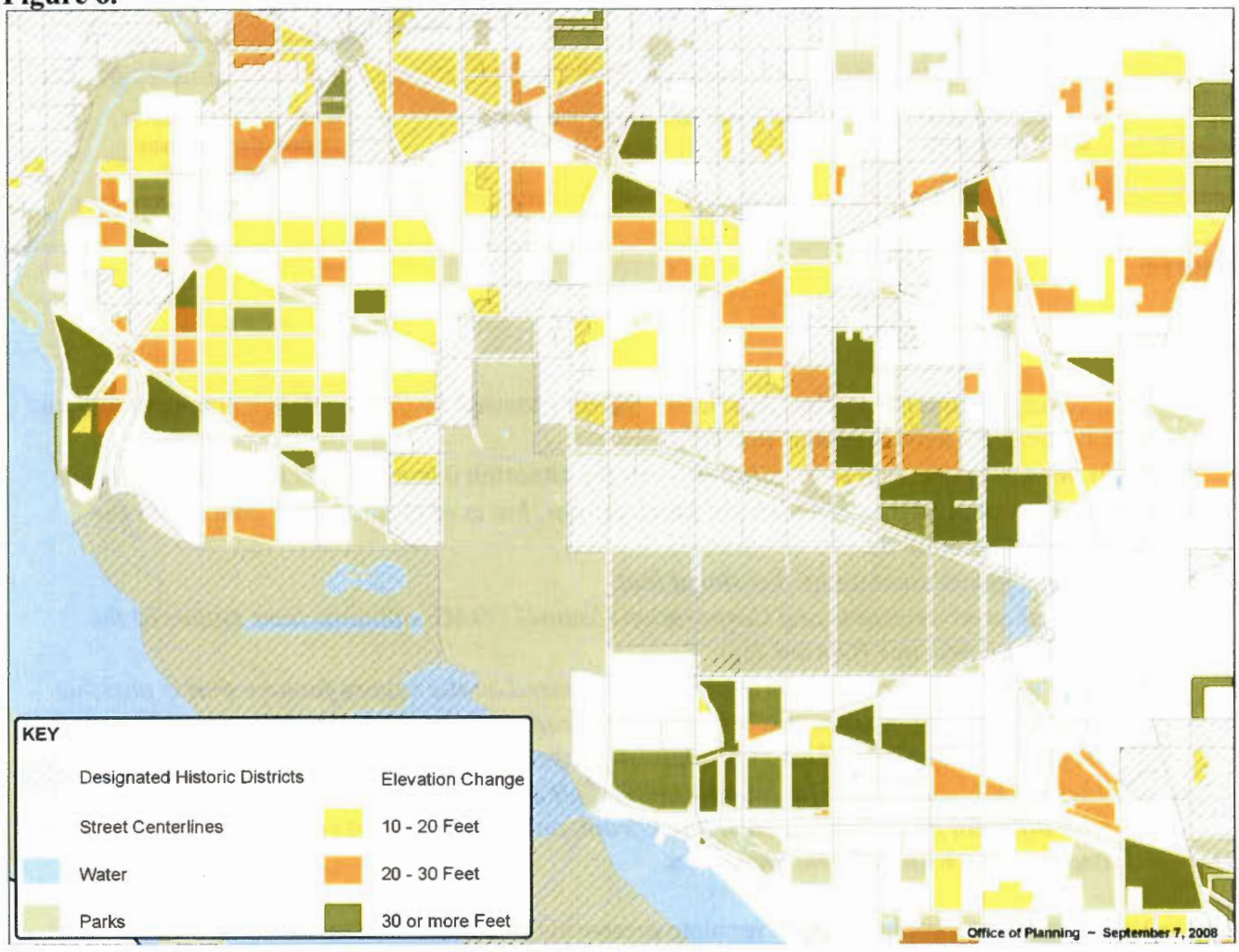
Option 1 represents the simplest way to regulate measuring point and addresses the concerns of the Working Group. For some properties Option 1 could result in lower total heights and decreased

development envelopes than has been achieved or assumed to be achievable. This could include much of the more densely developed parts of the city, as well as properties in other parts of the City, if they have multiple street frontages and the wider right of way is at a lower elevation than a street adjacent to another side of the property.

Option 2 reflects existing practice, precedent and over fifty years of official opinions of the District's Corporation Council / Office of Attorney General. It would avoid potentially negative impact on future building heights and available development envelopes, and ensure that existing buildings would not be made non-conforming due to height.

Figure 6 gives an approximate idea of Squares that might be affected by Option 1, for properties that have multiple frontages on a property Square. The measurements are only approximate due to the limitations of current technology. However, the general patterns are valid. With the option, the revised height determination/measuring point could reduce future buildings heights by one or more floors from what is currently permitted.

Figure 6.



IV.B. 2. Elevation of Bottom Measuring Point

Existing Practice
The point from which the District measures a building is "the level of the curb opposite the middle of the front of the building".

Issues

Two problems with this were identified by members of the Working Group:

- The curb does not usually represent the grade at the building face; and
- The Height Act allows measurement from the "sidewalk" rather than the curb.

Recommendation B.2 (Recommendation 6)

The height of a building shall be measured from the midpoint of the building property line along a public street. The elevation for this point is determined by the level of the curb as approved by the District government plus a 2% gradient between the curb and the property line, up to a maximum height difference of 12 inches.

Analysis

It is clear that a common standard for measuring point should be established used between the two documents and that the Zoning Regulations can be made more clear. However, the standard of measuring from the sidewalk is less clear since sidewalks are often sloped for drainage, may be moved more easily than curbs, and in some cases are not provided at all. For these reasons it is important to maintain a standard based on the curb.

The measurement itself can still be made from the sidewalk at the property line. However, because of drainage standards, this level is often higher than the curb. The solution proposed by a Working Group member was to use the curb as a basis, but allow a 2% gradient to the property line for standard drainage requirements. This would be capped at one foot and would allow a measurement of the building from the actual ground level rather than the curb level that may be much lower than the building face.

Comments and OP Response

- *This recommendation was discussed by the Working Group, but was believed by many to be unnecessary.*

  OP has included the recommendation for consideration because of the discrepancy between "curb" and "sidewalk" noted above.

IV.B. 3. Natural Grade

Existing

The Zoning Regulations define the natural grade as "the undisturbed level formed without human intervention or, where the undisturbed ground level cannot be determined because of an existing building or structure, the undisturbed existing grade." (11DCMR § 199)

Issues

This definition has several shortcomings including a lack of definition for human intervention and unclear standards for unique situations.

Recommendation B.3 (Recommendation 7)

The "natural elevation" or "natural grade" of a property is the ground elevation that existed prior to the issuance of the first special or building permit, including a raze permit, needed to begin the construction of the building for which a height measurement is being made. Where natural elevation, is interrupted by a bridge, viaduct, embankment, ramp, abutment, tunnel or other type of artificial elevation, the height of a building will not be measured from the human-constructed elevation, but will be measured from either a street frontage not affected by the artificial elevation, or from a level determined by the Zoning Administrator to represent the logical continuation of the surrounding street grid where height is not affected by the discontinuation of the natural elevation.

Explanation

There is no adequate definition of natural grade. Since elevations throughout the District have been disturbed by farming, grading, road building, etc., it is difficult to determine the historical natural grade, or grade without human intervention. This section clarifies that the natural grade is the elevation existing prior to the initiation of a project covered by the Zoning Regulations.

The second sentence of the recommendation specifies from where the natural grade or elevation shall be measured with respect to bridges, viaducts, embankments or artificially constructed depressions. The Regulations stipulate that a building's permitted height cannot be measured from a bridge, overpass or viaduct even if it had a direct entrance on to such. This did not address measurements from road, railway or other transportation embankments; measurements from podiums atop which multiple buildings may be erected; or from depressed roadways that may have building platforms erected over them at a later date. The suggested concept is intended to put the measuring point into the context of where the elevation was before interventions for highways and railroads, and to prevent the site from being artificially raised or lowered for height prior to filing for a building-related permit.

Comments and OP Response

- *The Working Group generally favored the concept, but did not reach consensus on the definition of natural grade. There were several concerns that in most urban situations a substantial percentage of the existing grades have resulted from human intervention over the centuries.*

There is no easy way to make historic grade determinations on a city-wide basis. This is the reason that the regulations are based on modern grade before new work is done and have discretionary treatment of unusual cases.

IV.B. 4. Top Measuring Point

Existing Practice

Buildings are measured to the top of the roof. However, the Zoning Regulations permit parapets of three feet to be excluded from this measurement.

Issue

The exception for parapets is clearly in conflict with the language of the Height Act for buildings constructed to the maximum height permitted by the Act.

Recommendation B.4 (Recommendation 8)

Buildings shall be measured to the top of the roof including any parapet on exterior walls, or any other continuation of the exterior walls. When a building's measurement, inclusive of a the full height of a parapet or balustrade, is below the maximum permitted height under the Height Act, a parapet or balustrade of up to 4' may be excluded from the height measurement.

Analysis

The District's Zoning Regulations and decades of practice have allowed a three-foot high parapet to be excluded from a building's height measurement. This concept is proposed to address potential conflicts between the Regulations and other legislation. It would include parapets within the maximum building heights permitted by the Height Act. However, if the height of the building is less than that allowed under the Height Act, a parapet or balustrade of up to the lesser of four feet or the maximum height permitted by the Height Act may be excluded from the height measurement. The change in standard from three feet to four feet is the result of input from the architects participating on the Working Group to reflect current building codes.

Comments and OP response

- *One person suggested eliminating "balustrade" since it not referred to elsewhere in the Regulations.*

OP suggests retaining the term, and defining it elsewhere since there is a difference between a parapet and a balustrade.

IV. C. STRUCTURES ATOP ROOFS

The Height Act describes types of structures permitted atop a roof and prescribes the setbacks from exterior walls for structures atop a roof that is at the upper limit permitted by the Height Act. The District has further restricted the heights and architectural features of most roof structures, both below and above the Height Act's upper limits.

There are several issues associated with the current regulation of roof structures and their set-back requirements.

- Unclear definition of the type of structures allowed on roofs
- Unclear definition of habitable space (or space for human occupation)
- Unclear definition of exterior wall

This section discusses conceptual recommendations for simplifying and clarifying these matters. There are four recommendations in this section. The first outlines the type of roof structures allowed. The second deals with the height and bulk of roof structures. The last two recommendations regulate the setbacks of roof structures.

IV.C.1. Structures Permitted Atop a Roof

Existing Practice

The Zoning Regulations permit the following construction to be above the level of the roof:

Roof Structures Generally Requiring Setbacks from Exterior Walls, Limited to a 0.37 increase in FAR, and Subject to "Architectural" Controls and FAR limitations:

- Housing for mechanical equipment; ventilation, stairway and elevator penthouses; storage, showers, lavatories that service rooftop swimming pools, and other enclosed spaces accessory to rooftop communal recreational uses;

Roof Structures Requiring Neither Setbacks nor Architectural Controls:

- Structures less than 4 feet above a roof or parapet;
- Spires, towers, domes, pinnacles, minarets serving as architectural embellishments;

Constructions Not Considered Roof Structures, and Not Subject to Architectural Controls or Setback Rules:

- skylights, gooseneck exhaust ducts for kitchens and bathrooms, plumbing stacks;

Structures Separately Considered:

- Telecommunications devices not essential to the building's operations are permitted above the roof, but are not considered mechanical equipment, for the purposes of roof structure regulations, and have a separate set of rules.

Issues

There are competing demands prompting a fresh look at how rooftops should be used.

- The technology supporting buildings and making them more energy efficient and less polluting has grown more complex and diverse in the last thirty years. Sustainability requirements have increased the need to devote more roof space to green roofs, photovoltaics, solar hot water harvesting and towers for "green lungs". This has prompted attempts to find additional space atop roofs to support this equipment. In Washington, there have been difficulties in accommodating some technologies due to the limitations on permitted types roof structures type limitations, and the impact that 1:1 setback regulations have on the placement of equipment that extends from below the roof to above it.

- An increased desire of developers and new residents to capture roof space for decks, pools and communal recreation areas.

- Changing architectural trends have made it fashionable to give building tops more distinction than they have had for the last 50 years.

- Many existing post-1910 buildings could not be rebuilt under the current regulations.

The following pictures illustrate features of existing buildings that:

- May not conform with current interpretations of the Height Act and Zoning Regulations; or
- Would be permitted by the recommendations in this report.

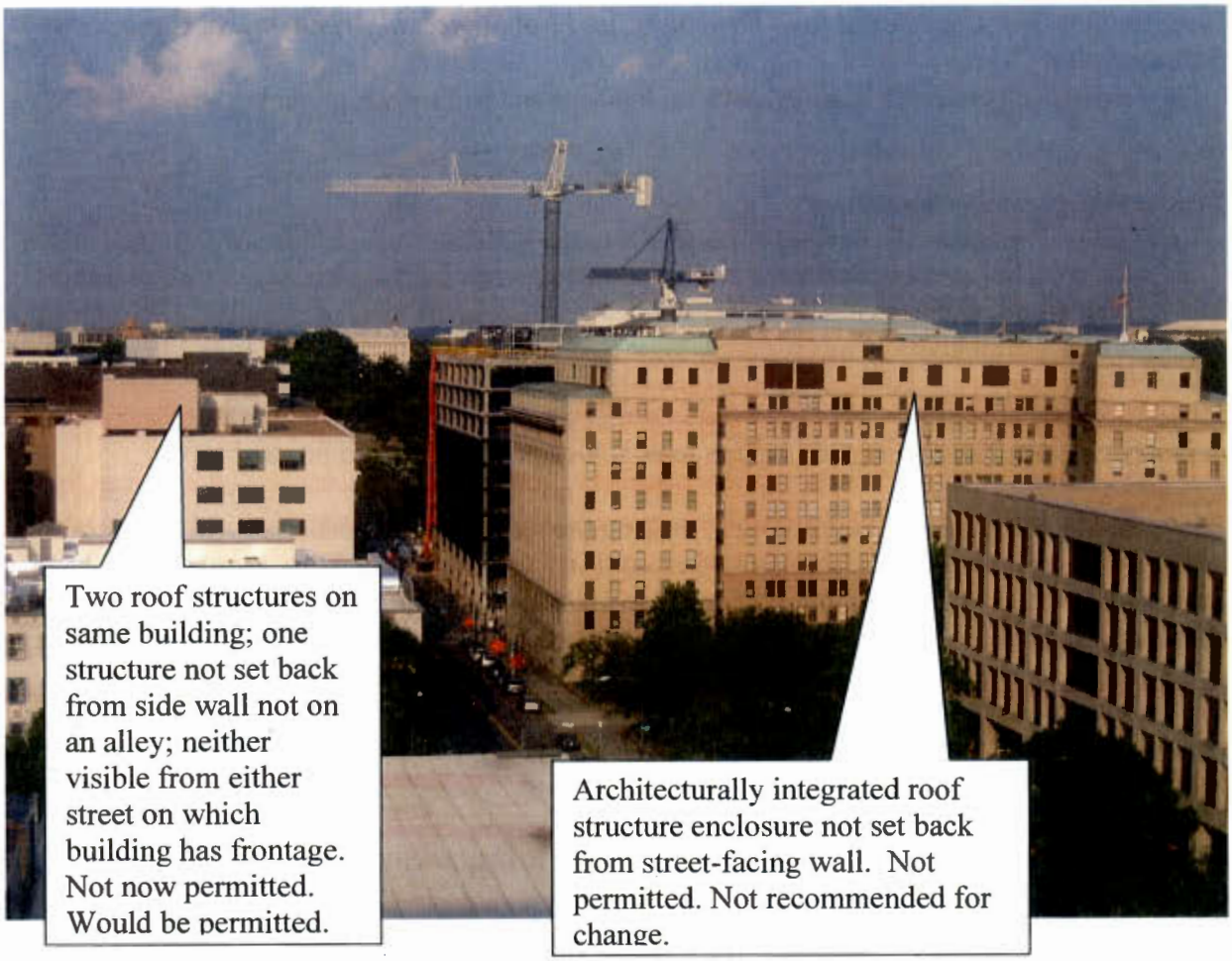

Two roof structures on same building; one structure not set back from side wall not on an alley; neither visible from either street on which building has frontage. Not now permitted. Would be permitted.
Architecturally integrated roof structure enclosure not set back from street-facing wall. Not permitted. Not recommended for change.

Figure 7

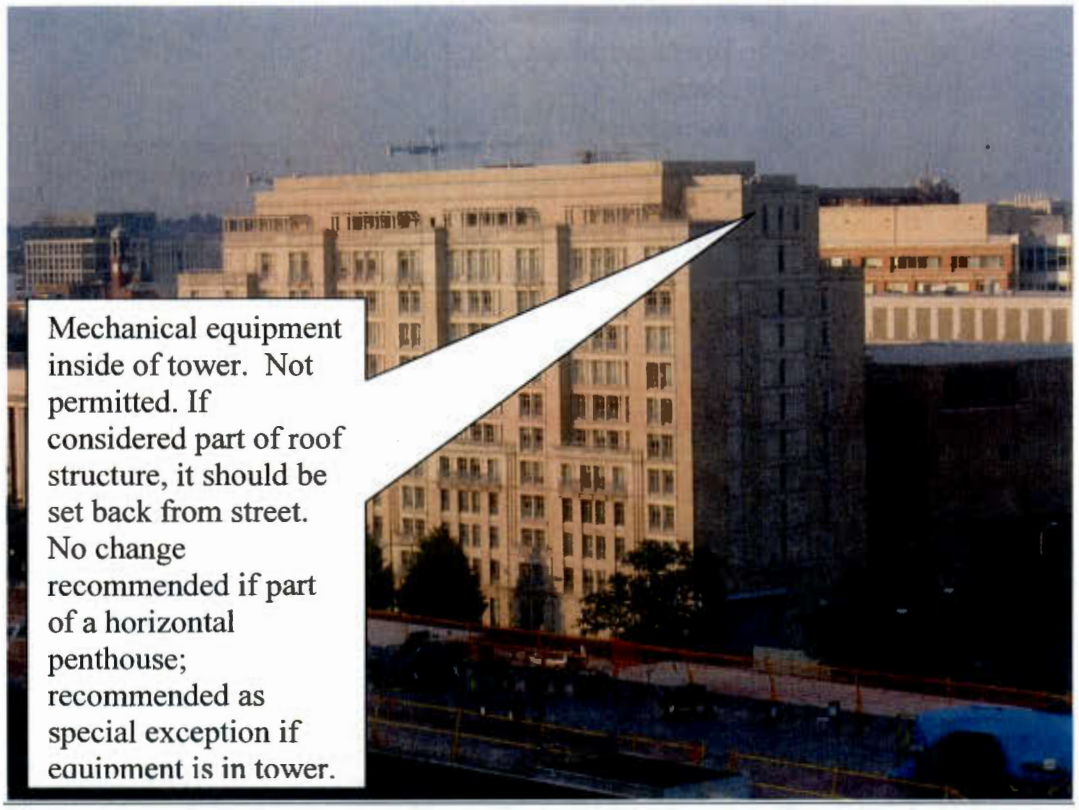


Figure 8

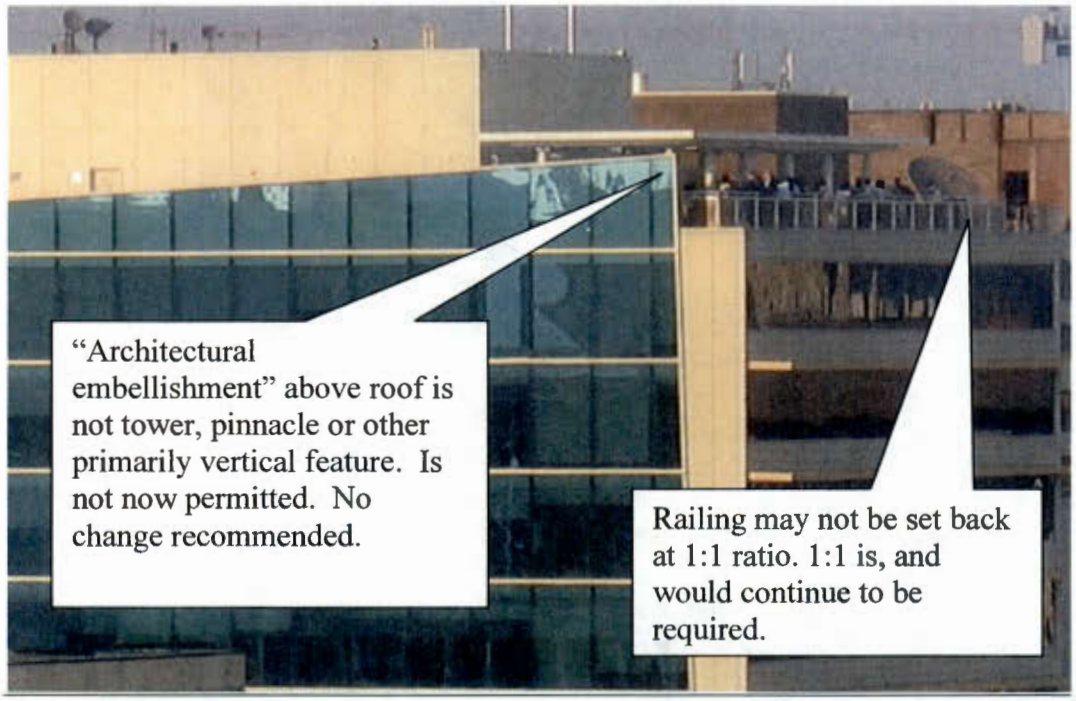


Figure 9

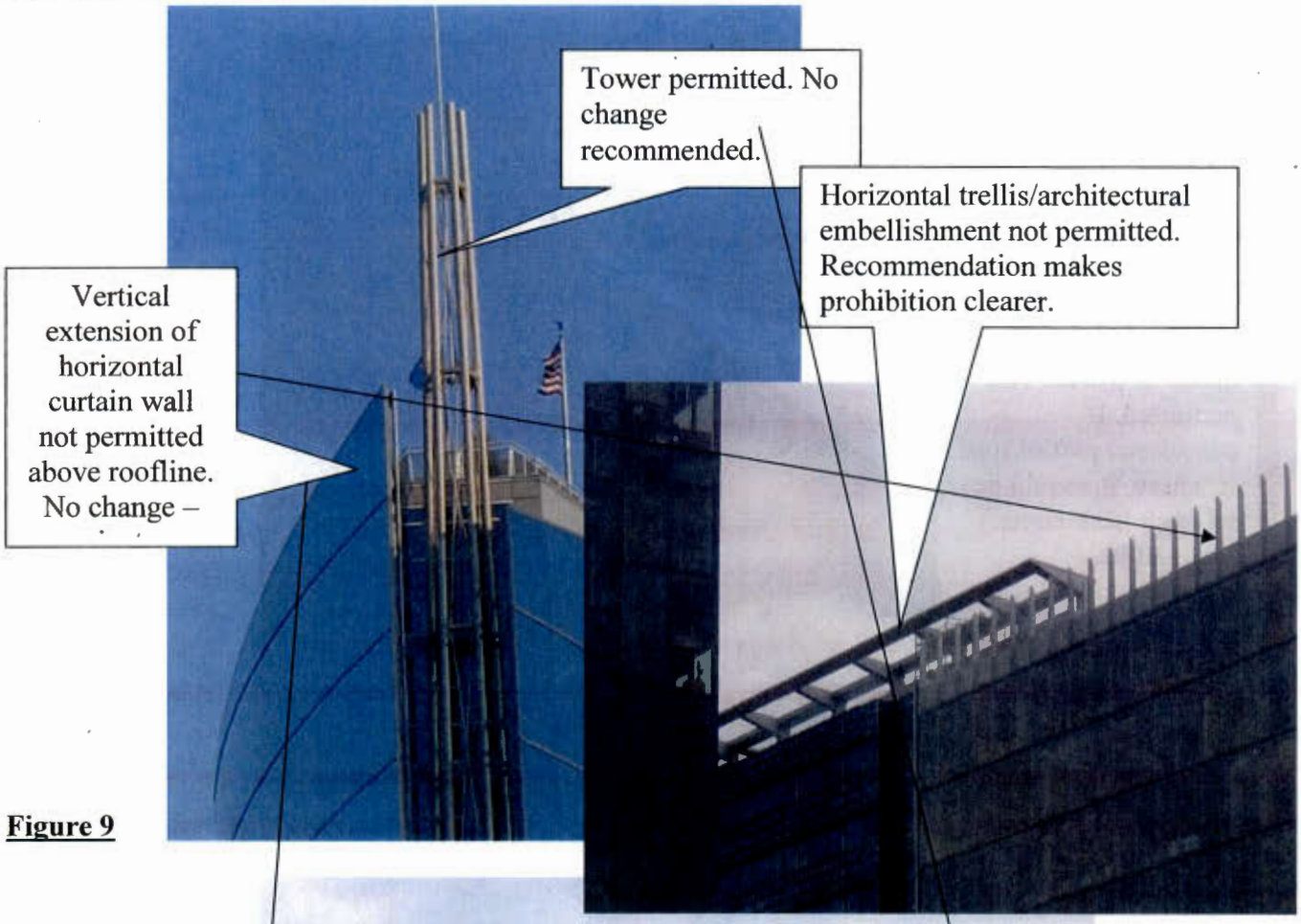


Figure 9

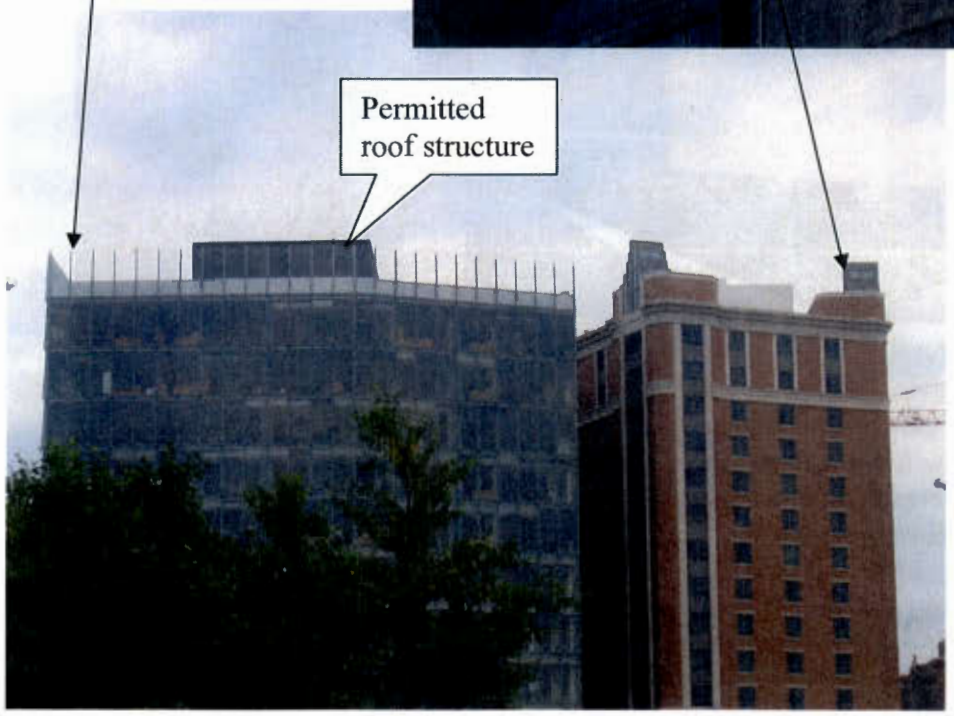


Figure 10

Recommendation C.1 (Recommendation 9)

The following features may exceed the limitations on height set forth in this title, subject to the provisions of this section:

(a) Ornamental features limited to spires, towers, domes, pinnacles, and minarets, that are aesthetic, primarily vertical elements of a building, even if used to cover/hide/mask utilitarian or amenity features;

(b) Utilitarian features including, but not limited to, mechanical equipment, safety railings, stairwell access, elevator penthouses, and building components or appurtenances dedicated to the environmental sustainability of the building; and

(c) Amenity features such as structures accessory to communal outdoor recreation space, communal pergolas, communal enclosed recreation space, and structures limited to providing individual unit access to private, unenclosed space atop a roof.

No structures for human habitation shall be constructed on a building's roof unless otherwise authorized by District law or regulation.

Analysis

OP recommends that roof structures be divided into three categories for regulation: ornamental, utilitarian, and amenity features. Ornamental features are those listed in the Height Act and traditionally labeled as architectural embellishments in the Zoning Regulations. Utilitarian features would include any mechanical, safety, or access functions of the building. This category would also include structures or equipment dedicated to the environmental sustainability of the building. (such as machines that generate electricity from wind, solar panels, hot water collectors and green roofs). The final category would be amenity features. This would include the communal features that the Zoning Regulations currently permit atop the roof, but not habitable enclosed for access to private exterior spaces atop a roof.

This change would help to clarify exactly what types of uses and structures are allowed on the roofs of buildings. The categorization of uses is useful in determining what features must be setback as well as in providing general descriptions of roof structures.

Comments and OP Response

Reactions to the concept have been mixed.

- *All parties agreed that occupied or habitable space was not appropriate above the limits set by* the *Height Act, but there were many opinions on what constituted those types of spaces.*
- *Some comments favored the proposed language outright. Others favored the suggested uses but believed that the Height Act does not permit the Zoning Regulations to allow some of the*

uses – especially those that permitted people to be in enclosed space accessory to outdoor recreation space.

- *Still others did not favor the expanded list, and felt that even if permitted by the Height Act the expanded uses should not be permitted by District Zoning Regulations.*
- *One suggestion for defining "habitable space" was based on number of hours a person (or people) occupied the space "A 'structure for human occupancy' is any structure which is or is expected to be physically occupied by a human at the rate of more than 200 person-hours per year".*

While the Height Act prohibits the construction of structures for human occupancy, it does not prohibit those for human use. It appears clear that there should be no dwelling units, or portions thereof, or private office space or other workspace on the roof. Subject to the interpretation of the Zoning Administrator, it appears that the only human uses of the roof space allowed by the Height Act are short term and temporary uses, such as communal recreation space that could be controlled for hours of operation and potential uses. This allows for investment in and enjoyment of District rooftops while not permitting habitable floor area to be extended to that part of the building.

IV.C. 2 Height, Width and Massing of Structures Atop a Roof

Existing Practice

The regulations are intended to give "architectural" controls for roof structures in all zone districts. Penthouses and mechanical equipment must be within a single enclosure with vertical walls of equal height, and its appearance must harmonize with the main building. However, if roof levels vary by at least one floor, one elevator enclosure is permitted at each roof level. The mechanical equipment must be fully enclosed, but a roof is not required over a cooling tower unless it projects above its enclosing walls. The overall building is given a 0.37 FAR increase specifically for roof structures; this does not count against FAR calculations for the area below the roof. For the present, roof structures in zone districts R-1 through R-5-A, C-1, and C-M-1 may not exceed 1/3 of the total roof area. Metrorail owned and operated roof structures do not have FAR limitations.

Issues

The single enclosure requirement has made applicants seek zoning relief for what has become standard construction: e.g., when large, accessible rooftops have code required "equal and opposite" emergency exits it is difficult to employ a single enclosure without also exceeding the 1/3 of roof area or .37 FAR regulations. It has also lead to structures that, through the granting of relief, are permitted to be broader than would be necessary. With the proposed changes some elements could be grouped into multiple, smaller enclosure areas for less visual impact.

The uniform height requirement has required enclosures to be taller than the necessary. The entire enclosure must be as18'6" tall as the tallest element (often to the maximum permitted 18'6") even if only a relatively small percentage of the screen wall needs to be that high to effectively screen mechanical equipment.

Architects on the working group have stated that with a modest increase in roof structure height, they would be able to stack more elements and free-up more of the roof for other uses, or for sustainable elements. Also, the verticality requirement has restricted architects' ability to give more pleasing shapes to the rooftop enclosures.

Statements about what ornamental features are permitted above a building are confusing. There is an impression that architectural embellishments are permitted atop roofs, when only spires, towers domes, pinnacles and minarets *serving as architectural embellishments* are permitted.

The zoning regulations do not limit the matter-of right height of towers, spires, domes, pinnacles or minarets.

Although decorative horizontal embellishments in the same vertical plane as the building façade are not ruled out, there is nothing that explicitly permits them to exceed Height Act limitations. The Working Group favored restricting such horizontal features.

Few distinctions are made among zone districts regarding the size and height of roof structures appropriate to different zones, uses, and scales context.

Recommendation C.2 (Recommendation 10)

Space enclosed by walls on a roof shall be limited to 40% of that roof's total area, but shall not count toward overall building FAR. The enclosing walls need not be vertical or of uniform height, and multiple roof structure enclosures shall be permitted.

Utilitarian and amenity features may not rise more than twenty feet (20 ft) above the roof.

Ornamental features should be restricted to those now permitted and may not rise more than thirty (30) feet above the roof, unless approved by the Board of Zoning Adjustment as a Special Exception.

Under Special Exception review, utilitarian and amenity features could be entirely enclosed within ornamental features not setback from exterior walls.

Analysis

The District's Zoning Regulations have set 18' 6" as the maximum height for a roof structure or mechanical equipment. They also require penthouses and mechanical equipment to be screened by a single enclosure with vertical walls of a uniform height. As suggested by architects in the Working Group, the proposed language increases the maximum penthouse height by 18", to 20', to better accommodate newer technologies. Multiple enclosures would be permitted and they could be of different heights and with walls that are not completely vertical.

Promoting environmental and sustainability is a major objective of the District. Many in the District wish to make more productive use of roofs for solar panels. Hot water collectors and green roofs help

achieve this objective. There is also interest in using roofs to add to the quality of leisure-time life, and to be more attractive.

There were differing opinions in the Working Group about the dimensional proposals for rooftop structures. Architects suggested that if multiple pieces of equipment could be stacked atop each other, more roof space would be available for sustainability features, green roofs or recreation areas. The architects suggested that permitting a roof structure to be 20' high would give them much more flexibility in design. The proposals would permit less blocky design of roof structures without additional visual intrusion at street level, because of the 1:1 setback requirement. Limiting additional roof structure FAR to 0.40 would continue to ensure they do not encroach on areas that would be beneficially devoted to green roofs.

Because the height of spires, towers, etc. ornamental features is not limited in the Zoning Regulations, there should be a process that reviews their height and impact the impact of these elements beyond a certain height above the roof.

Comments and OP Response

- *There is not adequate documentation for why the roof structure height limitation should be increase by 1 ½ feet, or what the impact of this would be. .*

  OP is willing to provide further study of this issue if necessary.

- *There is no reason to make ornamental towers receive BZA approval to exceed 30 feet. This would have required prominent existing places of worship to have gone before the BZA to construct their existing bell towers.*

  Such structures would require special exception review. When exceptionally tall ornamental structures rise significantly above the District's generally horizontal skyline, there is a public interested in reviewing their impact, design, etc.

- *There were objections to permitting utilitarian equipment to be enclosed in ornamental features such as towers. The primary concern was that although buildings such as the Warner Theater and the Kennedy-Warren coupled well-designed towers with the enclosure of utilitarian equipment, it seemed unlikely that such a favorable combination would be achieved now, and would serve more as an excuse for enclosing equipment in inappropriate locations.*

  While this concern is understandable, the threat of bad design is not a reason to prevent the possibility of good design. The OP proposal would require that this situation be reviewed as a special exception, which could include design criteria for this very reason.

Related Issues

OP will continue to explore the possibility of developing different rules for size of roof structures based on a more refined distinction among zones, street classifications or building types or uses. It

may be appropriate to have different standards for structures atop a roof in, for example, low and moderate density residential zones, than for those in business zones or higher density residential areas. These will be given further consideration before the Commission takes preliminary action.

IV.C. 3. Setbacks for Structures Atop a Roof

Existing Practice

The Height Act and the Zoning Regulations stipulate that roof structures must be set back from exterior walls in a ratio of one unit of horizontal set back for one unit of vertical rise. There are exceptions for some types of stacks and ventilation equipment, and more stringent setback requirements for the densest commercial areas. The BZA may entertain special exception relief requests for roof structure location, design, number, height and setbacks, but only within the parameters set by the Height Act.

Traditionally the District has not required setbacks from party walls, which have not been considered exterior walls. It has permitted special exception relief from required setbacks from alley-facing walls.

Issues

The setback requirements have fallen into a "gray area" for structures atop roofs that are below the Height Act's upper limits. The District has permitted special exception relief from setback requirements for such structures. The NCPC has recently suggested that even if a roof is below the Height Act limits, a setback is needed for any part of a roof structure that is higher than the level the Height Act permits for the roof itself.

Set-backs from party walls and side walls are another issue. The District has not considered party walls to be exterior walls. Accordingly, setbacks have not been required from such walls. This practice has been called into question recently because roof structures along some side walls have become more prominent. In row house neighborhoods not developed to their zoning-permitted height, rising land values have made it more practical to build pop-ups or new floors atop existing buildings. Even when these are in the middle of a row, they can be visible from the street. If there is a break in the row form, such as a vacant lot or a side yard, the new construction is more visible. Similarly, PUDs and TDRs have permitted more buildings to rise to the Height Act maximum, with accompanying. When setback relief has been granted to accommodate utilitarian or sustainability features on such building, the roof structures may become more visible from the street if they are built at or under the matter of right height limit.

The Comprehensive Plan calls for all party walls to be considered as exterior walls for zoning purposes (see next section). This provision points to requiring setbacks from party walls for any construction atop a row house roof, or possibly for any construction higher than an abutting wall party wall. In row house neighborhoods such a practice would require 1:1 setbacks from at least the front and side walls of buildings that typically range from 15 to 25 feet wide.

The existing practice has led to numerous requests for relief from the setback requirements.

Recommendation C.3 (Recommendation 11)

Utilitarian and amenity features shall be set back at a distance at least equal to their height above the adjacent roof from (a) any exterior wall; (b) any wall that is set back from and facing a lot line,; and (c) any lot line wall built higher than the greater of the neighboring building's actual height or matter-of-right height.

The following shall not be subject to the requirements of this section:
Skylights; Gooseneck exhaust ducts; and Plumbing vent stacks.

The Board of Zoning Adjustment may approve relief as a special exception from the requirements of this section where compliance would be impracticable because of operating difficulties, size of building lot, or other conditions relating to the building or surrounding area, provided that the intent and purpose of this chapter and title shall not be affected adversely.

Analysis

The proposals would require 1:1 setbacks from:
- exterior walls (see recommendation C.4);
- walls facing, but removed from, lot lines; and
- party walls extending higher than the neighboring building is built (or is allowed to build to)

The concept permits a roof structure to be built up to the side wall of a building, unless the side wall is: set back from a lot line or is higher than the greater of adjacent building's actual height or the height to which the adjacent building could rise as a matter-of-right. This will mean that fewer roof structures will need relief to be built up to party walls, but will still require relief from side wall setback requirements for the most potentially visible roof structures. Setbacks are not required from interior courts, but are required from the street-facing walls of open courts.

Currently nothing is permitted to be inside an ornamental feature above the roof. In the 1920's and 30's buildings such as the Warner Building and the Kennedy-Warren Apartments were permitted to locate elevator overruns and other mechanical equipment inside of architecturally impressive tower-like decorative features that rose higher than the permitted roof height. The recommendation would permit utilitarian and amenity features located entirely within an ornamental feature to be relieved of setback requirements, if approved by the Board of Zoning Adjustment as a Special Exception.

Comments and OP Responses

- *Some members of the Working Group favored requiring the setback of roof structures from all walls, particularly for single family and row house buildings.*

  Requiring roof structures to be set back from an abutting building of equal or greater height will have little or no positive visual impact, and would often result in no matter-of-right options for a building to locate a roof structure. OP is willing to examine the restriction of roof structures on rowhouses.

- *Several comments reiterated that the District may not permit setback relief above the Height Act's maximum permitted heights.*

  This is of course true for exterior walls. This is an important distinction because the zoning regulations can require setbacks from exterior wall and other walls. Below the Height Act limits all of these setbacks may be relieved by Special Exception, however at the Height Act limit, only walls not defined to be "exterior walls" may be relieved from setback requirements. This concept is explored in the following recommendation.

Related Issues

Further study may be needed to determine setback requirements that would strike the right balance between permitting structures atop rowhouses and other low and moderate density buildings, and minimizing the light, shadow and visual impacts of those structures. This would be considered as part of the low and moderate density residential zone studies.

IV.C. 4. Exterior Wall

Existing Practice

The Height Act requires roof structures to be setback from exterior walls. An exterior wall is not defined. In practice the District has always considered exterior walls to be those facing a street; has varied on its consideration of alley walls and has often permitted setback relief from them; has not considered party walls or other side facing walls to be exterior walls[2].

Issues

The District's practice has permitted roof structures to be located closer to party walls and rear walls and farther away from walls facing streets. This has increased flexibility for locating systems and support elements within buildings and has reduced roof structures' visibility from public streets. However, it has also permitted the location of roof structures that are visible on-angle from the street or from the sides.

Some citizens, and the NCPC, have indicated concerns with this practice.

Recommendation C.4 (Recommendation 12)

An exterior wall is any wall facing a public street, alley, or any area dedicated to the District for the public use of pedestrians or vehicles.

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[2] Consistent with the District's 1917 building regulations' definition of external walls as "the outer wall or inclosure of a building other than a party wall".

Analysis

The proposed concept makes clear that the District considers not only a wall facing a street, but also a wall facing an alley or other public way, to be an exterior wall. It does not consider party walls or other side walls to be exterior walls. The previous section recommended that setbacks still be required from some party walls and other side walls.

For the purposes of zoning, designating alley walls as exterior walls will make it impossible for the BZA to grant setback relief from these walls for roof structures.

Comments and OP Response

- *Developers noted that the District has a long tradition of not considering walls facing alleys to be exterior walls, and has permitted roof structures to have less of a setback from them in order to achieve greater setbacks from walls facing streets. They are concerned that the proposed provisions will compromise the ability to locate elevator cores, etc. at logical corner locations, even if they are in the back of a building.*

  The comments may be valid, and the District has often granted rear wall setback relief for roof structures. OP recognizes that the proposed definition may require a different approach to core designs for some buildings. However, while there has been a long tradition of permitting special exceptions from rear wall setbacks, even the District's 1917 building code, which excludes party walls from its definition of external walls, does not exclude rear walls or alley-facing walls from being considered external walls. OP will consider various types of relief valves in further sections of the Zoning Regulations review process.

- *Some members of the Working Group noted that the proposed language may not be consistent with the Comprehensive Plan's Land Use Statement 2.1.B: "Amend definition of exterior wall for zoning or height requirements to include the division-line wall or party wall of a row house or semi-detached house".*

  OP notes that the zoning interpretation of whether a roof structure setback is required from a party wall has varied over the years. OP believes that the proposed language adequately addresses the objectives of LU 2.1.B, while permitting a reduction in the number of required roof structure relief applications

IV. SUMMARY

This report has addressed the major issues relating to the concepts of determining permitted height, how to measure it, and what can rise above its usual restrictions. It is intended to help promote and focus public and Commission discussion of these topics at the upcoming public hearing. These comments will help to inform additional reports OP may prepare prior to further Commission or public review of these height-related proposals.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF PLANNING

MEMORANDUM

TO: Zoning Commission for the District of Columbia

FROM: Travis Parker, Zoning Review Manager

DATE: December 1, 2008

SUBJECT: ZC Case 08-06-1

Proposed Amendments to the Height Regulations 11 DCMR

On September 25, 2008, the Office of Planning (OP) presented preliminary recommendations for revisions to the height regulations as part of the Zoning Review Process. Members of the Zoning Commission left the record open for further comment and modification of the recommendations. Below are further discussion and OP recommendation changes based on comments heard at and after the public hearing.

1. Streets with Multiple Frontages

No new analysis or change to this recommendation.

Recommendation #1
Any street abutting a building's property line may be used to determine the maximum height allowable, based on the street's width, designation, and height restrictions imposed by this Chapter. There should be no requirement for the presence of an entrance to designate a building "front" or "face."

2. Streets Fronting on Open Space

The two sides of this issue are either to adopt the precedent from the Techworld building and measure for height across the full reservation, or follow a more conservative approach of using just one of the rights-of-way adjacent to the reservation. OP has heard many good arguments on both sides of this issue.

OP completely accepts the urban design perspective that our public reservations are monumental spaces that should be framed by larger buildings and that a system that bases the height of buildings on the width of the street should provide for the largest buildings on the largest open spaces. However, we also recognize the language of the Height Act to say that the height shall be determined by the "widest street, avenue, or highway" and does not seem to allow for combination or addition of the reservation itself.

Based on analysis in the September 15 report, OP identified only five possible reservations that would be limited to a height less than 130' under a more conservative interpretation. Based on

this analysis and the language of the Height Act, OP does not propose any change to this recommendation.

Recommendation #2
When any portion of a building abuts a property line that is directly across a street from a public open space or reservation, the building's maximum allowable height may be determined by the width of any single right of way that is not divided by the public open space or reservation and that is adjacent and parallel to any single side of the open space or reservation

3. Business vs. Residential Streets

No new analysis or change to this recommendation.

Recommendation #3
A "Residence street" would be any block face that contains any residential property located in a low to moderate density zone district, as those zones may be described after completion of the zoning review process, or any block face entirely made up of properties of any existing residential zone.

A "Business street" would mean any other block face. As with Recommendation A.1, a property adjacent to both a commercial and a residence street could choose its frontage and utilize the greater of the zones' permitted heights.

4. Single vs. Multiple Buildings

Both before and after the hearing, OP has received dozens more examples of single buildings that do not meet the tests outlined in our original recommendation. Based on the totality of comments received, OP retracts the suggested requirement that there be a connection on multiple floors.

There are three tests that OP recommends be included in the distinction between single and multiple buildings:
1) the connection is above ground, and
2) the connection is enclosed, and
3) the connection either:
    a) is common space shared by users of all portions of the structure (e.g. a lobby or recreation room), or
    b) allows open passage between separate portions of the structure (e.g. an unrestricted doorway or walkway)

One issue remains with regard to test #2 above. Some buildings in the District have been built with private alleys for truck or vehicle access. There are examples of buildings where structures completely separated by a private drive were connected as one building by a covered walkway across the driveway that also allowed truck passage beneath the cover. Comments by Holland & Knight have raised this issue both to avoid the creation of non-conformity in existing buildings and to determine whether this type of connection should be considered in determining single

buildings in the future. OP is open to a review of these situations on a case-by-case basis, but hesitates to recommend a blanket definition of building that would allow roofed-only connection with no enclosed walls across alleys, private or otherwise. This potential exemption is not included in our recommendation below, but should be discussed by the Commission in deciding on this recommendation.

Recommendation #4

A "building" is a structure having a roof supported by columns or walls for the shelter, support, or enclosure of persons, animals, or tangible property. ~~When separated from the ground up or from the lowest floor up by common division walls, each separate portion shall be deemed a separate building unless there is open access between all portions on at least half of the shared floors. Two or more structures that are in all other respects physically separate from each other cannot be combined to form a single building through the introduction of any type of physical connection between the structures, including a trellis, walkway, garage or tunnel, at any location.~~ In order to be considered one "building" for zoning purposes, separate structures must be connected in the following way:

1) the connection is above ground, and

2) the connection is enclosed, and

3) the connection either:

a) is common space shared by users of all portions of the structure (e.g. a lobby or recreation room), or

b) allows open passage between separate portions of the structure (e.g. an unrestricted doorway or walkway)

5. Location of Bottom Measuring Point

For the reasons outlined in the report and the testimony at the public hearing, OP recommends that the Commission adopt Option 2 of the original recommendation (see below). Option 2 reflects the existing process for measuring height that has been used for over 60 years. To change the precedent would result in the creation of dozens, if not more, cases of non-conformity across the city and the potential to further limit the already restrictive development potential in new development areas.

Recommendation #5

~~Clarify the determination of the measuring point for building height when a building faces more than one street. Option 1: The street chosen to determine the maximum allowable height must also be used to determine the point from which building height is measured. Option 2:~~ Any abutting street which a building faces may be used to determine the measuring point regardless of which abutting street is used to determine maximum allowable height.

6. Elevation of Bottom Measuring Point

No change to the original OP recommendation. For the draft text that will follow preliminary approval of this concept, OP will examine an exception to this rule for when there is no curb.

Recommendation #6
The height of a building shall be measured from the midpoint of the building's property line along a public street. The elevation for this point is determined by the level of the curb as approved by the District government plus a 2% gradient between the curb and the property line, up to a maximum height difference of 12 inches.

7. Natural Grade & Artificial Grade

This recommendation contains two parts, "natural grade" and areas of artificial elevation. A concern has been raised regarding areas of artificial elevation where the elevation level has been previously determined (e.g. L'Enfant Plaza, or the Portals development). The intent of the second part of this recommendation was to provide a way to calculate building elevation in areas that the determination had not previously been made and rely on precedent where it is available. OP has amended the recommendation to clarify this.

Recommendation #7
The "natural elevation" or "natural grade" of a property is the ground elevation that existed prior to the issuance of the first special or building permit, including a raze permit, needed to begin the construction of the building for which a height measurement is being made.

Where natural elevation, is interrupted by a bridge, viaduct, embankment, ramp, abutment, tunnel or other type of artificial elevation, the height of a building will not be measured from the human-constructed elevation, but will be measured from either a street frontage not affected by the artificial elevation, or from a level determined by the Zoning Administrator to represent the logical continuation of the surrounding street grid where height is not affected by the discontinuation of the natural elevation. Where the measuring point elevation has previously been determined for purposes of buildings and/or elevated streets, the previously recognized elevation will control.

8. Top Measuring Point

No new analysis or change to this recommendation.

Recommendation #8
Buildings shall be measured to the top of the roof including any parapet on exterior walls, or any other continuation of the exterior walls. When a building's measurement, inclusive of a the full height of a parapet or balustrade, is below the maximum permitted height under the Height Act, a parapet or balustrade of up to 4' may be excluded from the height measurement.

9. Structures Permitted Atop a Roof

No new analysis or change to this recommendation.

Recommendation #9
The following features may exceed the limitations on height set forth in this title, subject to the provisions of this section:

(a) Ornamental features limited to spires, towers, domes, pinnacles, and minarets, that are aesthetic, primarily vertical elements of a building, even if used to cover/hide/mask utilitarian or amenity features;

(b) Utilitarian features including, but not limited to, mechanical equipment, safety railings, stairwell access, elevator penthouses, and building components or appurtenances dedicated to the environmental sustainability of the building; and

(c) Amenity features such as structures accessory to communal outdoor recreation space, communal pergolas, communal enclosed recreation space, and structures limited to providing individual unit access to private, unenclosed space atop a roof.

No structures for human habitation shall be constructed on a building's roof unless otherwise authorized by District law or regulation.

10. Height, Width and Massing of Structures Atop a Roof

Based on comments at and after the public hearing, OP no longer recommends a limit to the height of ornamental features. In addition, OP recommends that the limitation of roof structure area be calculated not on roof area, but rather on building footprint. Using the roof area that results after required upper-story setbacks in certain areas can easily result in overly constrained roof structures.

Recommendation #10
Space enclosed by walls on a roof shall be limited to 40% of ~~that roof's total area~~ the building's total footprint, but shall not count toward overall building FAR. The enclosing walls need not be vertical or of uniform height, and multiple roof structure enclosures shall be permitted.

Utilitarian and amenity features may not rise more than twenty feet (20 ft) above the roof.

~~Ornamental features should be restricted to those now permitted and may not rise more than thirty (30) feet above the roof, unless approved by the Board of Zoning Adjustment as a Special Exception.~~

Under Special Exception review, utilitarian and amenity features could be entirely enclosed within ornamental features not setback from exterior walls.

11. Roof Structure Setbacks

The original OP recommendation would have allowed roof structures visible from the street along the side walls of open courts. The recommendation has been changed to require a setback in those locations and to reflect changes to the definition of exterior wall in Recommendation #12.

Recommendation #11
Utilitarian and amenity features shall be set back at a distance at least equal to their height above the adjacent roof from (a) any exterior wall; (b) any wall facing an alley;(c) any wall facing a court open to a street; ~~(b)~~ (d) any wall that is set back from and facing a lot line,; and ~~(c)~~ (e) any lot line wall built higher than the greater of the neighboring building's actual height or matter-of-right height.

The following shall not be subject to the requirements of this section:
Skylights; Gooseneck exhaust ducts; and Plumbing vent stacks.

The Board of Zoning Adjustment may approve relief as a special exception from the requirements of this section where compliance would be impracticable because of operating difficulties, size of building lot, or other conditions relating to the building or surrounding area, provided that the intent and purpose of this chapter and title shall not be affected adversely.

12. Exterior Walls

Based on the comments of the Commission at the public hearing and others since, OP agrees to remove its recommendation that alleys be considered "exterior walls" for the purposes of rooftop setbacks. This distinction is only relevant at the level of the Height Act. Alleys would still have a setback requirement under zoning at all heights, but would not be considered an exterior wall for purposes of the Height Act which would allow a special exception from the alley wall setback requirement at all heights.

Recommendation #12
An exterior wall is any wall facing a public street~~, alley, or any area dedicated to the District for the public use of pedestrians or vehicles~~.