Government of the District of Columbia

Height Master Plan for the District of Columbia

FINAL EVALUATION & RECOMMENDATIONS

November 20, 2013

District of Columbia
Office of Planning

I. OVERVIEW

Washington, DC, recognized around the world as this nation's capital and as a monumental city of great beauty, is also a city that must provide services to over 630,000 residents as well as to hundreds of thousands of workers and visitors every day. These services run the gamut from those typically provided by municipal governments like police and fire safety, to those normally funded by counties or states such as public schools, transit and housing finance. The District has to fund all of these responsibilities from a tax base that excludes half of the District's land and is thus inordinately reliant on a small base of locally-generated property, income and sales taxes. This means that to maintain fiscal stability the District must attract and retain many of the middle class residents that fled the city in the previous four decades, while also diversifying our economy and increasing jobs for District residents. For more than one hundred years, the District has endeavored to achieve these goals under federal building height restrictions that apply citywide. For much of the first 100 years, these height limitations gave this city its unique horizontal character giving particular prominence to nationally significant monuments and structures and that reinforced the urban design principles of the L'Enfant Plan. However, over the next 100 years, the District is and will continue to face growing demand for space and services that are increasingly constrained under the current federal height limits.

The District of Columbia partnered with the National Capital Planning Commission (NCPC) between fall 2012 and November 2013 on a joint Height Master Plan requested by Congress to determine the extent to which the federal Height of Buildings Act of 1910 (The Height Act) continues to serve both the federal and District government interests. The Height Act is a federal law which provides uniform restrictions on the height of all buildings within the District of Columbia boundaries.

The District has looked carefully at a range of alternative approaches to adding height and modeled the results from several perspectives using over 250 different views of the city—including panoramic, aerial, and street level views—in various locations inside and outside the L'Enfant City, as well as from vantages across the Potomac. We have examined the ability of the city to accommodate continued population and employment growth at a range of growth rates under existing conditions, including the current Height Act limits, and with changes to zoning and the District's Comprehensive Plan.

Finally, we have analyzed the alternative approaches to managing height and the capacity they create to accommodate growth if the Height Act were amended.

We examined the processes in place that will allow the federal interest to continue to be protected if Congress were to enact modifications to the Height Act, including the Comprehensive Plan revisions that need to be submitted to Congress for approval and the eventual zoning changes that need to be approved by a Zoning Commission where 2 of 5 members are federally appointed.

The District concludes that the federal Height of Buildings Act can and should be reasonably modified to strike a balance between accommodating future growth and protecting significant national monuments and memorials. These modifications would give the District more autonomy to set different building height maximums through a collaborative future Comprehensive Plan process with NCPC, local citizens and the Council of the District of Columbia in limited areas in the city. This approach shifts more decision-making to local control—especially in areas where the federal interest is less significant—in order to accommodate future population growth while at the same time protecting prominent national monuments, memorials, and the unique character of local neighborhoods. Doing so will ensure a more prosperous, diverse, and vibrant District of Columbia, where District residents enjoy a diversified, stronger and more resilient economy, and the District's social and economic diversity is protected. The alternative—of retaining unchanged a century-old law that artificially constrains the city's ability to accommodate growth—will place the District on the path of becoming a city comprised primarily of national monuments and civic structures, surrounded by exclusive neighborhoods affordable only to the very few.

The District recommends retaining the Federal height limits outside the L'Enfant City unless and until the city amends the District Elements of its Comprehensive Plan to allow heights above 130 feet or otherwise above the current federal limits; that Comprehensive Plan is approved by the Council of the District of Columbia; the NCPC approves those amendments; and after submittal to Congress, that Comprehensive Plan is approved by Congress. The District also recommends allowing some streets within the L'Enfant City to have additional height in a manner that retains the characteristic relationship between street width and building height, ensuring light, air and a human-scaled city, but uncapped by 19th century fire safety constraints. The District's Comprehensive Plan and zoning processes guarantee both extensive public input and

the protection of federal interests—through the federal government's integral role in the District's Comprehensive Plan approval process and its significant presence on the District's Zoning Commission. These recommendations are accompanied by an additional proposal to create viewshed protection around the U.S. Capitol, White House and the Washington Monument as part of the Comprehensive Plan amendment process. In addition, we propose that any human occupation of penthouses be permitted with a maximum height of 20 feet, while enclosing mechanical penthouses in the top floors.

This report details the District's rationale behind its final recommendations for reasonable modifications to the Height Act. The central issue the District's recommendations attempt to address is how changes to the federal Height Act can be accomplished in a way that allows the federal government and the District of Columbia to reap the economic, fiscal and social benefits of additional height while preserving the visual preeminence of the Capitol and other national monuments and protecting their views, minimizing impacts to nationally significant historic resources, and maintaining the horizontality of the skyline. The District believes that its recommendations would protect the dual federal interests of preserving the prominence of federal monuments and landmarks, as well as ensuring the economic stability and vitality of the Capital City.

II. BACKGROUND ON THE HEIGHT ACT

On September 11, 1789, Major Pierre Charles L'Enfant expressed his desire to be of service to President George Washington in planning the development of the young nation's capital city:

> *No nation perhaps had ever before the opportunity offered them of deliberately deciding on the spot where their Capital city should be fixed, or of combining every necessary consideration in the choice of situation - and altho' the means now within the power of the country are not such as to pursue the design to any great extent it will be obvious that the plan should be drawn on such a scale as to leave room for the aggrandisement and*

embellishment which the increase of the wealth of the Nation will permit it to pursue at any period however remote[1].

From the beginning, his great plan was conceived on a grand scale, and was influenced by the plans for Paris and Versailles. While concerned with the city in all its dimensions, he laid the city out with a hierarchy of streets including broad avenues that provided long vistas with monumental focal points. His foresight was so great that what was considered a matter of ridicule by his 19th century critics, particularly the remark by Charles Dickens about the "City of Magnificent Intentions" with its "broad avenues that begin in nothing and lead nowhere,"[2] has now become a testament to the enduring "comprehensive, intelligent, and yet simple and straight-forward scheme devised by L'Enfant."[3] L'Enfant Plan also established an urban design relationship between building height and street width, which later became the foundational principle for the limits set by the Height Act.

Congress passed the Height of Buildings Act in 1910 to respond to concerns from residents and others about the construction of the Cairo building, built in 1894 at 1615 Q Street, NW. The Cairo, a residential building, reached 164 feet, making it the tallest building in the city. Residents and others were alarmed about the effect of the building's height on light and air, as well as the ability of firefighting technology to respond to emergencies. Other cities also had or were putting height limits in place during the time the Height Act was passed, including St. Louis (150 feet), London (80 feet), and Chicago (130 feet). Congress initially passed a law in 1899 restricting heights in the city to the width of the street at the building front, while setting a maximum height of 90 feet on residential streets and 110 feet on commercial streets.

The Height of Buildings Act is a federal law that applies citywide and that sets uniform maximum building heights throughout the District. The Act establishes the principle of relating the height of buildings to the width of the adjacent street. Heights on residential streets are determined by the width of the street, up to 90 feet (approximately 7 to 8 stories). For commercial streets, heights are determined by the

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[1] H. Paul Caemmerer, *The Life of Pierre Charles L'Enfant, Planner of the City Beautiful, The City of Washington*. Washington: National Republic Publishing Company, 1950, pp. 128-129.
[2] Charles Dickens, *American Notes for General Circulation*, 1842.
[3] U.S. 57th Congress 1st Session, Senate Committee on the District of Columbia, Senate Report Number 166, *The Improvement of the Park System of the District of Columbia*. (3rd Edition) Washington: Government Printing Office, 1906, p. 24.

width of the street plus twenty feet, up to a maximum of 130 feet (approximately 10-11 stories), as illustrated in Figure 1. The law permits the north side of Pennsylvania Avenue, NW between the U.S. Capitol and the White House to rise as high as 160 feet (approximately 12-13 stories). The south side of the avenue houses mostly federal and landmarked buildings such as the Old Post Office.

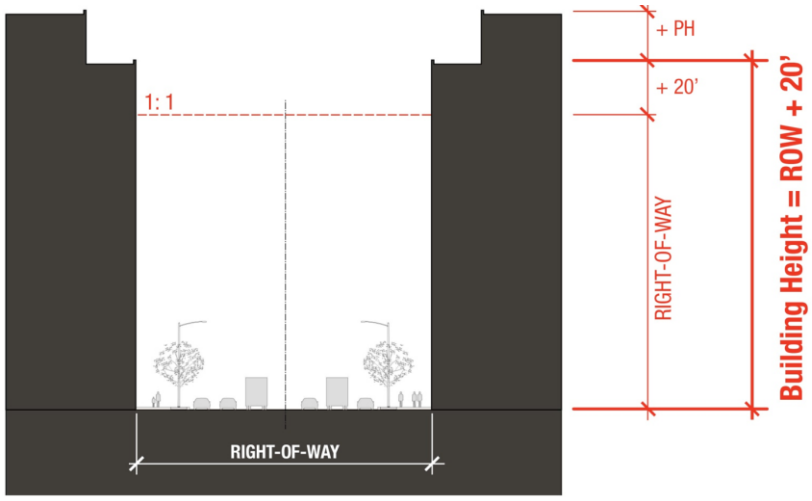


Figure 1: Height Act as Applied on Commercial Streets

III. HEIGHT MASTER PLAN OVERVIEW AND DISTRICT OF COLUMBIA PARTICIPATION

Since the enactment of the federal Height of Buildings Act of 1910, there have been only seven changes or exceptions to the law, and the Act has provided the District of Columbia with its generally uniform, low rise urban character. However, in recent years there has been consistent discussion about revisiting the law to allow greater building in various areas of the city.

Following a July 19, 2012 public hearing by the House of Representatives Committee on Oversight and Government Reform on "Changes to the Height Act: Shaping Washington, D.C., For the Future," Committee Chairman Darrell Issa and Congresswoman Eleanor Holmes Norton identified the need for a strategic study of building heights that would determine the extent to which the Height of Buildings Act of 1910 continues to serve both the federal and District government interests. Chairman

Issa sent a letter on October 3, 2012 to District of Columbia Mayor Vincent Gray and National Capital Planning Commission Chairman L. Preston Bryant formally requesting a joint proposal for the study. The District and NCPC submitted letters in November 2012 confirming their intention to conduct a joint Height Master Plan guided by the following principles:

- ensuring the prominence of federal landmarks and monuments by preserving their views and setting;
- maintaining the horizontality of the monumental city skyline; and
- minimizing the negative impacts to nationally significant historic resources, including the L'Enfant Plan.

Since then, the DC Office of Planning (OP) has led the District's efforts in partnership with NCPC on the study. The District contracted consultant services for two studies:

- An **Economic Feasibility Analysis** that looked at the effects or limitations of construction costs at various height-level alternatives and made some preliminary economic projections of the consequential effects of changes in building height at the same height alternatives; and
- The **District of Columbia Height Master Plan Modeling Study** that modeled existing and alternative building heights throughout the city and developed view analysis studies demonstrating the impact of these changes on the city's form, including its skyline, its most significant public spaces and streetscapes, and views to and from the city's most iconic structures such as the Washington Monument.

OP partnered with NCPC throughout the study to conduct a vigorous public engagement process, including co-hosting four Phase 1 public meetings in May and June 2013 to present an overview of the Height Master Plan, a discussion of the core study principles as well as federal and local interests, and case studies on how other cities have managed height. For Phase 2, OP and NCPC held a briefing to the Commission on the results of the economic feasibility analysis and the modeling study in July 2013 and hosted five public meetings to present the study results in August. OP and NCPC held a Phase 3 public information session in September to discuss NCPC's and the District's draft recommendations that were released that month. The District's draft recommendations and the consultant materials are also available on OP's website,

www.planning.dc.gov. OP provided materials from both of its consultant studies for the Height Master Plan website, www.ncpc.gov/heightstudy, including all public presentations, the final Economic Feasibility Analysis report and an index of all of the visualizations completed for the modeling study. Additionally, OP participated in facilitated discussions with key stakeholder groups, such as federal agencies, historic preservation organizations and private sector representatives. OP also testified at a DC Council Committee of the Whole public hearing on the District's draft recommendations on October 28, 2013 and participated in a special NCPC session to take public testimony on NCPC's and the District's draft recommendations on October 30th.

The Height Act is a federal law that can be modified only through congressional action. Any relaxation by Congress of the current Height Act restrictions would still require further review, public participation, and decisions by the District and federal governments about whether, when and where any changes to building heights would actually occur. The District would undertake amendments to its Comprehensive Plan and then initiate any zoning changes deemed appropriate through its normal processes, including substantial public input, to respond. It is worth noting that due to NCPC's review and approval authority over the District Element of the Comprehensive Plan and federal representation on the District's Zoning Commission, significant federal involvement in building height determinations through these processes will continue regardless of whether any changes are made to the Height Act.

IV. ECONOMIC FEASIBILITY ANALYSIS

The District of Columbia hired a consultant team led by Partners for Economic Solutions (PES) to conduct an Economic Feasibility Analysis that examined the feasibility of development at heights taller than currently allowed under the Height Act, factoring in the influence of construction costs, market demand and rents on development decisions. This analysis also identified the potential impacts of increased height on the District's economy. The study used in its analysis heights of 130 feet (the current maximum under the Height Act); 160 feet (currently allowed under the Act only on the north side of Pennsylvania Avenue, NW); 200 feet; and 250 feet. It should be noted that the PES report and the Modeling Study discussed later were conducted as

independent studies and not all of the height increments examined in these analyses are the same.

The study developed constructions cost estimates for new office and residential buildings at the four height increments and for the addition of one to four floors to existing office buildings. These cost estimates were incorporated into pro forma analyses to test the feasibility of development at heights in 15 illustrative submarkets throughout the District. The illustrative submarkets, which include areas such as 17th and K, NW, NoMa and Congress Heights, were selected based on criteria including high and medium density designation in the District's Comprehensive Plan Future Land Use Map, adjacency to transit and development opportunities. The pro forma analysis reflected whether market demand and rent in the illustrative submarkets could support the construction of higher-rise buildings. The analysis also assumed the buildings would fill the zoning envelope in order to maximize the value of building's Floor Area Ratio.

It is important to note that the Economic Feasibility Analysis walks us through the analysis any property owner would undertake in deciding whether to rebuild or add floors to a building if additional height were allowed. However, the Economic Feasibility Analysis examines the market's ability to support higher-rise development through a very short outlook of the next 5 to 10 years—notably, a period when capacity to continue to build still exists—while its fiscal impact calculations use only a 20-year period through 2040. Any potential changes to the federal Height Act are likely to have impacts well beyond a 5- or 20-year timeframe. The current Act is 100 years old, so the Height Master Plan considers how the Act will serve the District's needs and changes over the next 100 years. It is likely that submarkets in the District that currently do not support higher-rise development could experience market shifts over a 100-year timeframe such that new market support would likely emerge, although we expect that there will always be relative differences in demand among District submarkets albeit with different neighborhoods in relative ascendance.

A summary of the findings of the Economic Feasibility Analysis follow.

Development Feasibility Findings

Per square foot construction costs for new office and apartment buildings at 130, 160, 200 and 250 feet peak at 200 feet but begin to decrease at 250 feet due to cost efficiencies

that occur at taller heights. Beyond the cost of construction, other conditions need to be in place to make it financially attractive for a developer or property owner to be willing to tear down an existing building with tenants and build new and taller. These conditions include a substantial increase in rentable space due to taller height; the potential for higher rents; major leases expiring or the opportunity to attract a new anchor tenant; or the need for major investment into an obsolete building. There are also a number of constraints that affect new construction, such as the need to pre-lease a major portion of a new building to obtain financing and the inadequacies of existing transportation and utility infrastructure.

The study concluded that the illustrative areas studied vary in whether market rents and demand can support the construction of higher-rise office and apartment buildings at those locations (see Figures 2 and 3). Additionally, an illustrative submarket that can command the rents to support new construction may not have the demand over the next five years to support a building at taller heights.

Figure 2: Higher-rise Office Locations

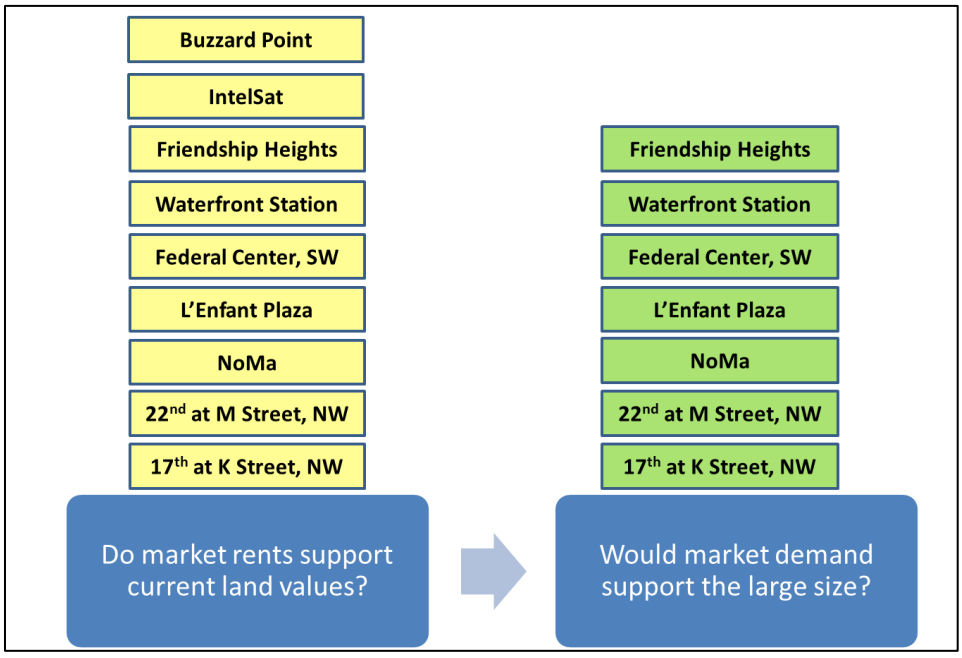
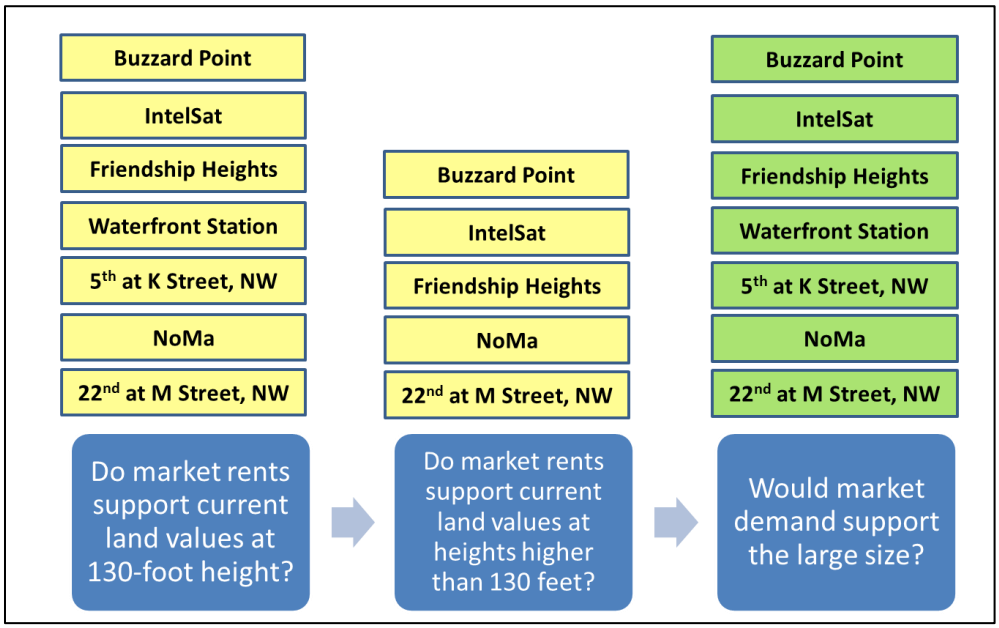


Figure 3: Higher-rise Apartment Locations



Vertical expansion for office use (the addition of two to three floors) is a more feasible option due to lower construction costs and the ability to redevelop without losing income-generating tenants. However, this option is most appropriate for the high demand Center City and Center City adjacent, Metro-accessible neighborhoods. Additionally, only existing buildings with at least 8 floors or more that were built prior to 2000 can support the load from additional floors.

Potential Economic Impacts

The Economic Feasibility Analysis concluded that having the flexibility to build taller than current height limits allow could strengthen the District's ability to compete in the regional market by targeting those heights to locations with high demand and Metro accessibility. Additionally, this flexibility to build taller would enable lower construction costs and more competitive designs such as taller ceiling heights and more windows and views. More competitive buildings could in turn attract more knowledge workers into the District as employees and residents, which would then support more retail. The analysis calculated a potential 1% to 2% increase in the District's capture rate of new regional office space (0.9 to 1.8 million SF) and 4,400 to 7,900 additional housing units over the next 20 years of development. During this period, capacity still otherwise exists in many of the submarkets to expand without additional height above 130 feet.

Additional capacity from added height need not be released to the market all at once, and could have negative economic impacts if that were to happen. The new developable capacity would increase property values and tax revenues if the capacity were released gradually. A flood of new capacity would depress the value of existing property, which would in turn put downward pressure on property tax revenues. One option to control the availability of new developable space is to decouple Floor Area Ratio (FAR) from height, so that FAR could increase at a smaller rate. Another option is for the District to auction the incremental FAR in order to capture that incremental value to fund infrastructure investments and affordable housing.

The Economic Feasibility Analysis developed a preliminary projection that from $62 million to $115 million in incremental annual tax revenues could be generated from property and sales taxes paid by workers and residents occupying new higher-rise office and apartment buildings developed over the twenty years. The range in preliminary tax revenue projections is based on the four height increments examined in the PES analysis. Note that this revenue projection applies only to the period before current capacity for growth is exhausted.

The Economic Feasibility Analysis concluded that increasing the maximum height cap could enhance the District's ability to attract more residents and capture more of the regional office market (with the associated jobs) if those increases were targeted to areas with high market demand. These areas would include Center City and other high demand, Metro-accessible Center City-adjacent locations where the rents are high enough to support the construction costs for higher-rise buildings.

In summary, the Economic Feasibility Analysis is intended to help us understand how private property owners and developers make decisions about expanding capacity. The report also illustrates that there will be a relative difference in parts of the city in terms of whether market rents would support the construction costs of taller buildings as well as whether demand would support increased capacity.

V. HEIGHT MASTER PLAN MODELING STUDY

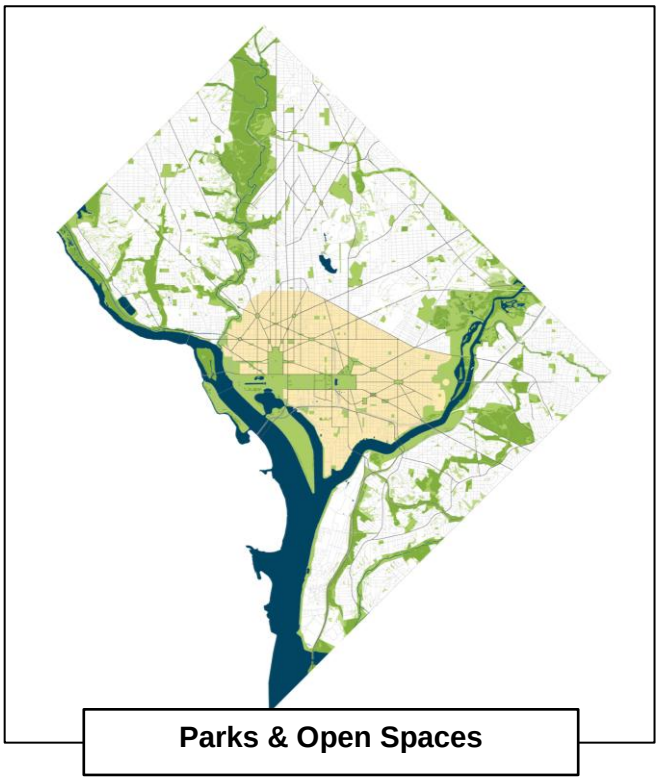
The Height Master Plan Modeling Study, conducted by OP's consultant team led by Skidmore, Owings and Merrill, are design studies of varying building heights to understand the impacts they could have on the District's character. The Modeling Study was guided by the three core principles of the Height Master Plan noted in

Section III. Over 250 images were produced that modeled the potential impacts of taller building heights on a variety of locations throughout the District. The Modeling Study does not include an analysis of infrastructure impacts of increased heights nor is it a zoning analysis. This study is primarily a visual massing study to illustrate how heights taller than currently allowed under the Height Act may appear in the District and what the potential visual impacts of that height could be. The Height Master Plan overall did not include an analysis of infrastructure. While such an analysis is beyond the scope of this study, OP and NCPC recognize that transportation and utility infrastructure is already seriously constrained and requires major investments to replace inadequate structures and expand capacity to address current and future needs.

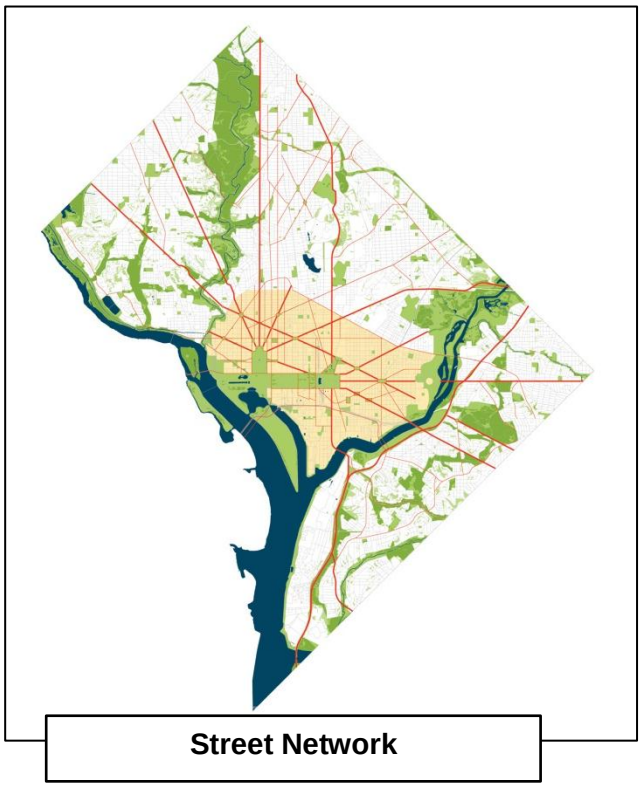
A. Modeling Study Methodology

The Modeling Study used the following methodology in creating the visualizations of increased building heights. The study:

1. **Examined existing conditions in the city**, such as parks and open spaces and the street network: a series of maps showed these conditions;



Parks & Open Spaces



Street Network

2. **Defined areas to be modeled with increased height and those areas to be excluded from the modeling**: OP and NCPC worked with the consultant team to first identify which areas of the District should not be modeled with taller heights, due to their significance and important role in the city's character. These excluded areas included: all federal properties, all historic landmarks and sites; low density areas in historic districts; all remaining low density areas, including residential neighborhoods; institutional sites and public facilities. Those areas are illustrated in the Figure 4 map below. The project team determined that sites already designated as high and medium density (both commercial and residential) were most appropriate for the purposes of this study to model increased building heights because those areas had already been identified for targeting growth in the future through the District's prior Comprehensive Plan processes (see Figure 5);

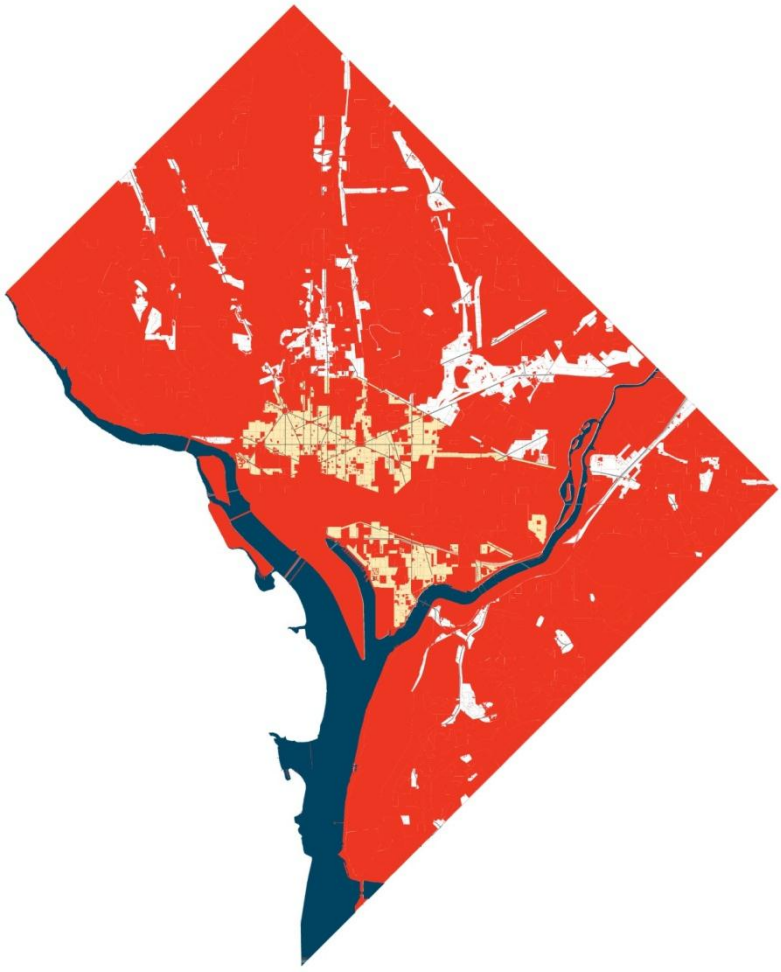
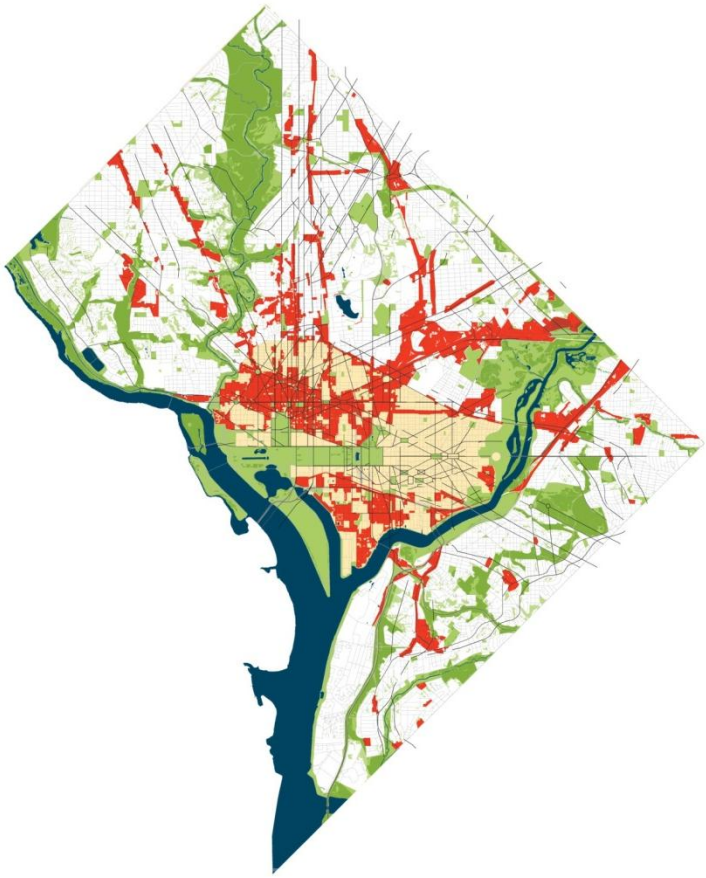
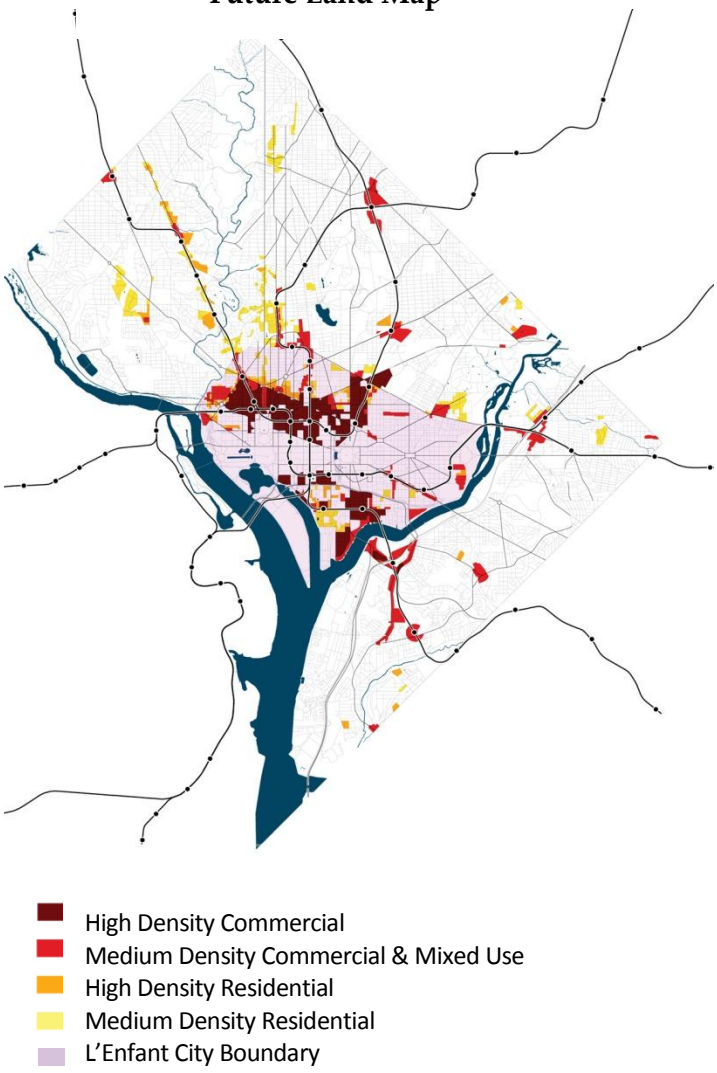


Figure 4: Areas <u>Excluded</u> from the Modeling Study (*in red*)

Figure 5: Areas <u>Included</u> in the Modeling Study (*in red*)



High and Medium Density Areas on the Comprehensive Plan Future Land Map



3. **Updated the Citywide GIS 3D Database**: The existing database dated to 2005 and has been updated to reflect new construction and significant changes to buildings since then. While the Modeling Study used a selection of study areas for the visualizations, 3D building data was updated for the entire city in order to add it to the central repository of spatial data for the District of Columbia and make it available for future efforts;

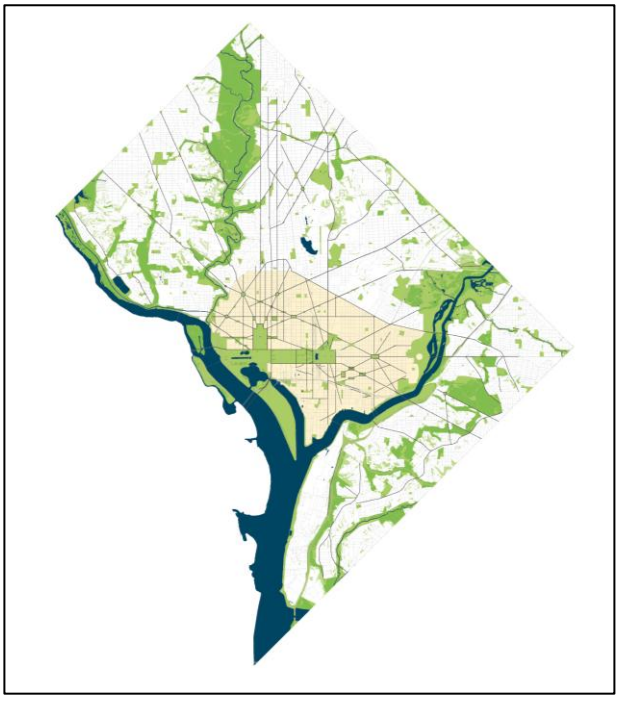
4. **Developed a photographic database of the study locations**, including aerial, skyline and street-level views;

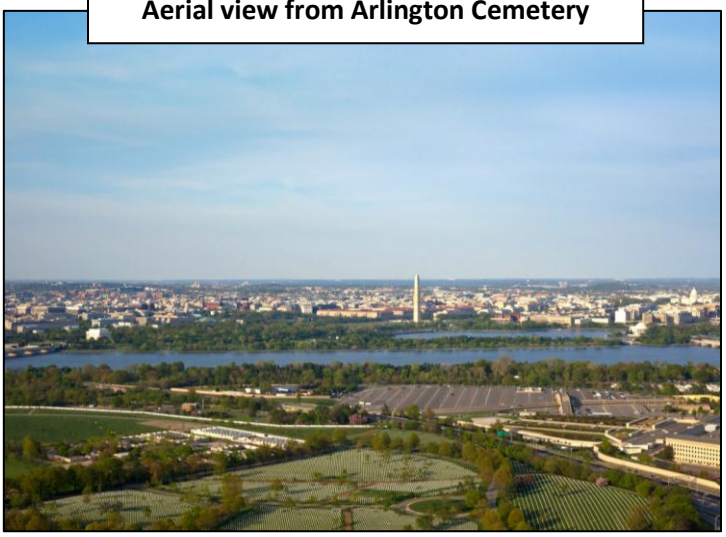
5. **Modeled various height increments**: Each modeled view used four height increments—130 feet (the existing limit under the current law); 160 feet; 180 feet; and a maximum 200 feet for study areas within the L'Enfant City and 225 feet for areas outside the L'Enfant City (including the Topographic Bowl and those Illustrative sites not within the L'Enfant City); and

6. **Considered the visual impacts of increased building height on the city's built form with respect to the core principles**: The Office of Planning presented the results of the Modeling Study at five Phase 2 public meetings and facilitated stakeholder discussions co-hosted with NCPC and posted the presentation and a collection of all modeled images on the Height Master Plan website. A key question asked of the project team and the public was whether the modeled images and the approaches to managing height they illustrate met the goals of the core principles.

The Modeling Study modeled taller heights at study locations using three perspectives or views:

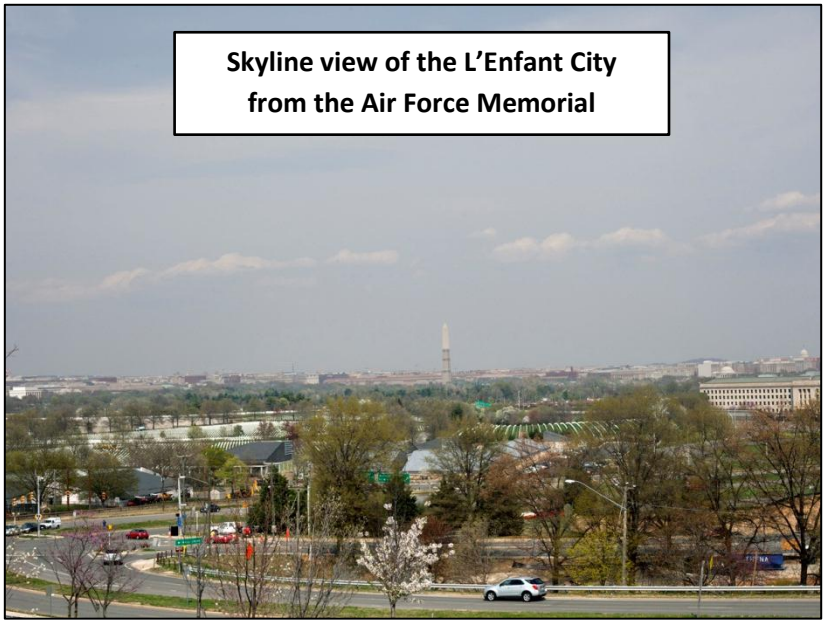
- Panoramic or aerial views that provided the larger context of height and the design of the city. Aerial photos were taken of views from iconic vantage points with open public access as well as gateways and corridors, all with views into the L'Enfant City;





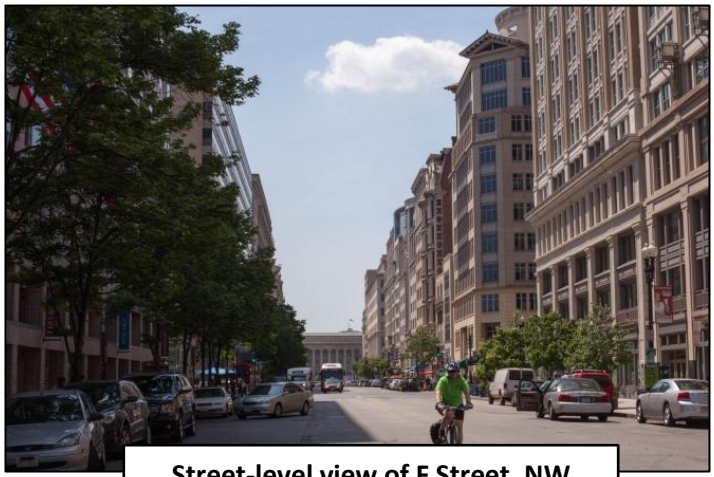
Aerial view from Arlington Cemetery

- Skyline studies that illustrate the potential impacts of increased height on the city's skyline character. These studies also used iconic vantage points with open public access; and



Skyline view of the L'Enfant City from the Air Force Memorial

- Street-level corridor studies to illustrated impacts on the pedestrian experience and public spaces. The Modeling Study used a selection of major streets and avenues within the L'Enfant City.

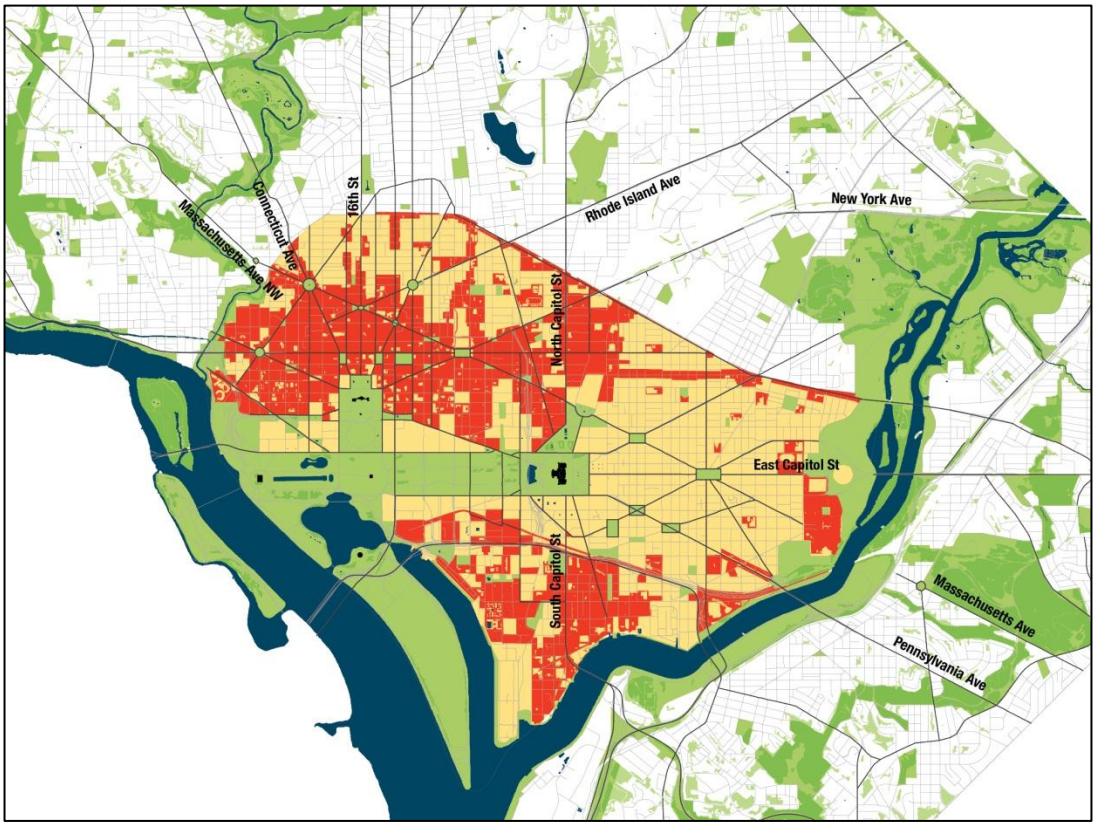


Street-level view of F Street, NW

Aerial and skyline views were used to model taller height increments in three geographic categories:

- The L'Enfant City (see Figure 6);
- The Topographic Bowl—the area beyond Florida Avenue and along the edges of the escarpment which reflect steep grade change beyond the L'Enfant City (see Figure 7); and
- Fourteen illustrative sites across the District that were selected based on criteria such as designation as high and medium density in the District's Comprehensive Plan Future Land Use Map; adjacency to transit; and the existence of development opportunities (see Figure 8).

Figure 6: Map of Modeled Areas within the L'Enfant City



The study locations for the skyline and aerial views were selected in particular to illustrate the impact of increased heights on the prominence of the U.S. Capitol Building, Washington Monument and other nationally-significant structures.

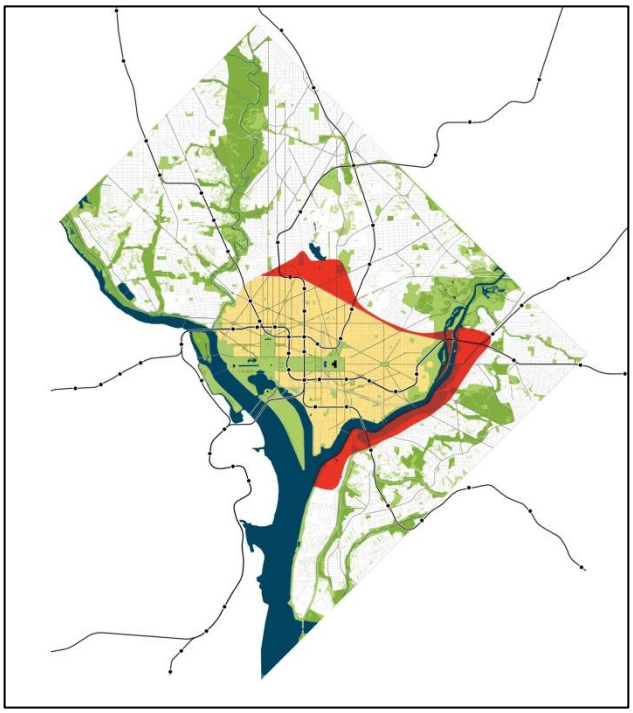


Figure 7: Modeled Areas within the Topographic Bowl

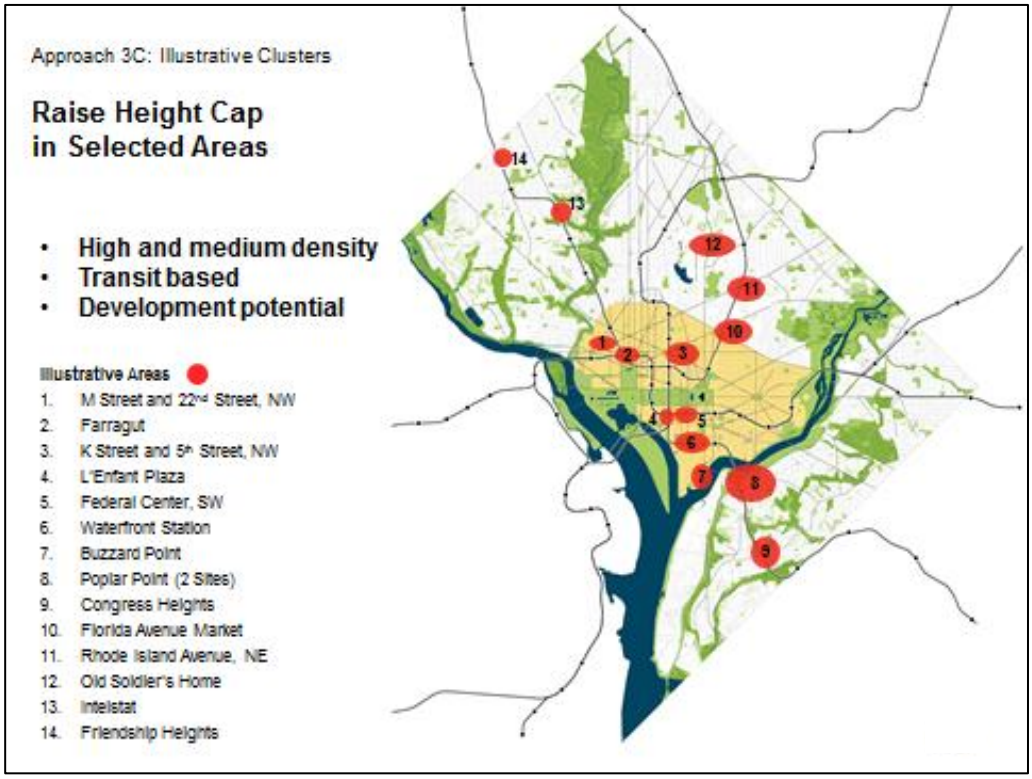


Figure 8: Illustrative Areas

B. Summary of Approaches to Manage Height

The Modeling Study presents four broad approaches to how height can be managed in them District. These approaches grew out of the modeling work conducted by the consultant team, the Office of Planning and NCPC and were developed collaboratively as options to present to the public for feedback during Phase 2 of the Height Master Plan. A summary of the four approaches follows:

Approach 1—Make no changes to the Height Act: This approach would maintain the existing height limits in the current Act. This approach includes two variations. Approach 1A notes there are areas within the District that are not currently built out to the 90-ft or 130-ft maximum due to zoning setting lower height caps. South Capitol Street is one example where zoning limits the height to 90 feet, although 130 feet is permitted under the Height Act. Figure 9 shows the view from South Capitol Street looking north to the Capitol Building with modeled buildings built out to the 130 foot limit currently allowed under the Act.

Figure 9: Approach 1A: View of South Capitol Street Built Out to 130 feet

The second variation, Approach 1B, would allow occupancy of the mechanical penthouse space permitted on top of buildings. Penthouses currently can rise to 18.5 feet above the maximum height and is not counted towards the height limit (see Figure 1). With this variation, existing 1 to 1 setbacks could be maintained (but little additional space gained) or the setbacks eliminated and the penthouse space expanded to the

building face. This would result in a new height of 148.5 feet, as illustrated on K Street, NW (see Figure 10).

Figure 10: Approach 1B—K Street View of Penthouse Occupancy with No Setback

<u>Approach 2—Reinforce the relationship between building height and street width</u>: Approach 2 would replace the standard height cap of 130 feet for commercial streets and 90 feet for residential streets with a variable cap determined by the width of the individual street. The Height Act mandates a 1 to 1 ratio between street width and building height for residential streets to a maximum of 90 feet, and a 1 to 1 ratio plus 20 feet for commercial streets, up to 130 feet. Approach 2 would instead create an urban design-based standard reflecting the proportionality between individual streets and their buildings, maintaining a pedestrian-scaled streetscape without the limitations of late 19th century firefighting technology. The avenues would house the tallest buildings, as those streets are the widest, in keeping with the spirit of the hierarchy of streets and relative building heights in the L'Enfant Plan and as reflected in the Height Act. Streets within the L'Enfant City, for example, vary in width. Many are 80 to 110-feet wide. Most of the avenues are 120-, 130- or 160-feet wide. Heights also can vary because the District's zoning often sets lower limits than what is permitted under the Height Act. The Modeling Study illustrated some examples of current street width to building height ratios. These include 14th Street, NW at New York Avenue, which is a

110-ft wide street with 130-ft tall buildings, resulting in a current ratio of 1 to 1.2 (see Figure 11).

Figure 11: New York Avenue, NW— existing 1: 1.2 ratio

The north side of Pennsylvania Avenue, NW between 3rd and 15th Streets is 160-feet wide and is permitted under the Height Act to have heights up to 160 feet. If Approach 2 is applied to this portion of Pennsylvania Avenue using a ratio of 1: 1:25, the building height could go up to 200 feet due to the 160-foot street width (see Figure 12).

Figure 12: Approach 2—View of Pennsylvania Avenue, NW with 200-foot Building (1: 1.25 ratio)

<u>Approach 3—Raise heights only in selected areas</u>: Approach 3 would apply any increased height to targeted areas, as opposed to the current citywide Height Act applicability. Approach 3 has three variations for how to target height:

3A: Raise height only in the L'Enfant City: Approach 3A would raise building height only within the boundaries of the L'Enfant City. This approach was modeled at 130 feet, 160 feet, 180 feet and 200 feet as the maximum (see Figure 13).

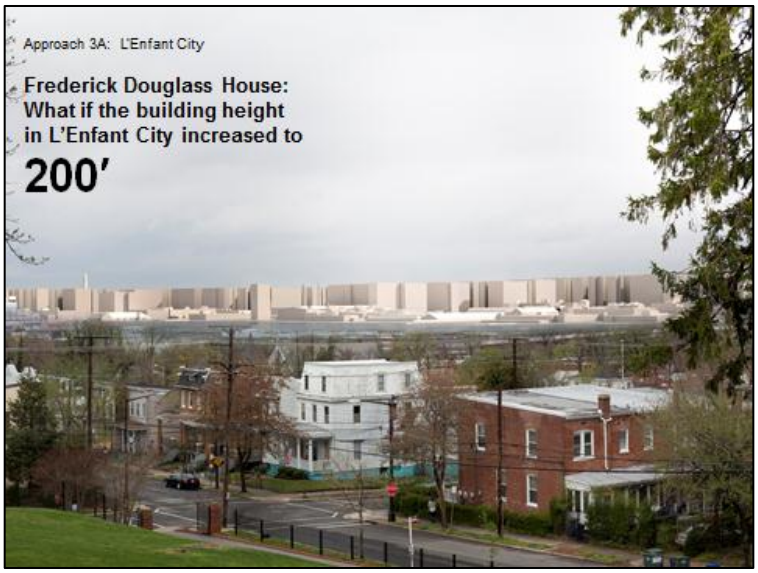


Figure 13: Approach 3A—Raise Height Only Inside the L'Enfant City

3B: Raise height only in the Topographic Bowl: Approach 3B would raise building height only in the Topographic Bowl, the area generally beyond Florida Avenue and along the edges of the escarpment which reflects the steep change in grade outside of the L'Enfant City (see Figure 7 map). This approach was modeled at 130, 160, 180, and 225 feet. The maximum height is taller than in the L'Enfant City based on the assumption that areas outside of the L'Enfant City may be able to accommodate taller heights. Figure 14 shows how this approach would look on Maryland Avenue, NE.

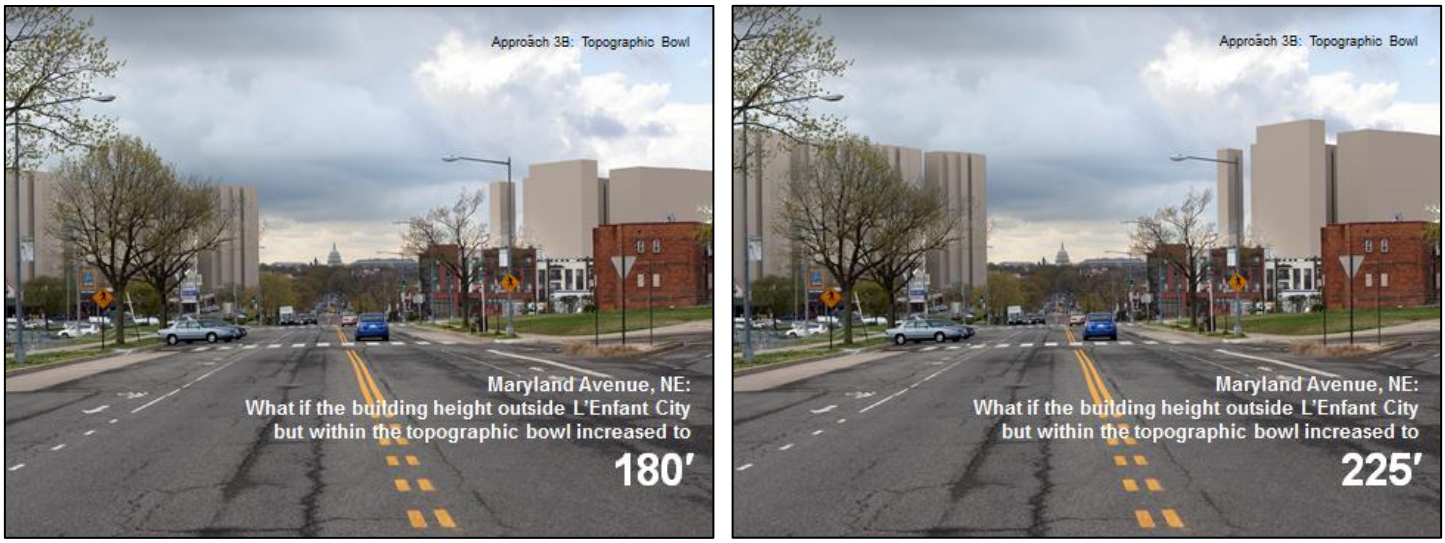


Figure 14: Approach 3B—Raise Height Only within the Topographic Bowl

3C: Raise height only in illustrative areas: This approach would target height to selected sites or clusters where future growth may be more appropriate. As noted earlier, for the purposes of this study, the selected illustrative sites (listed in Figure 8) are examples of sites already designated as high or medium density on the Comprehensive Plan Future Land Use Map, have close adjacency to transit and/or offer development opportunities. This approach was modeled at 130, 160, 180, and a maximum 200 feet for illustrative areas inside the L'Enfant City and 225 feet for those outside the L'Enfant City (see Figure 15). This clustered approach is used in cities such as London today.

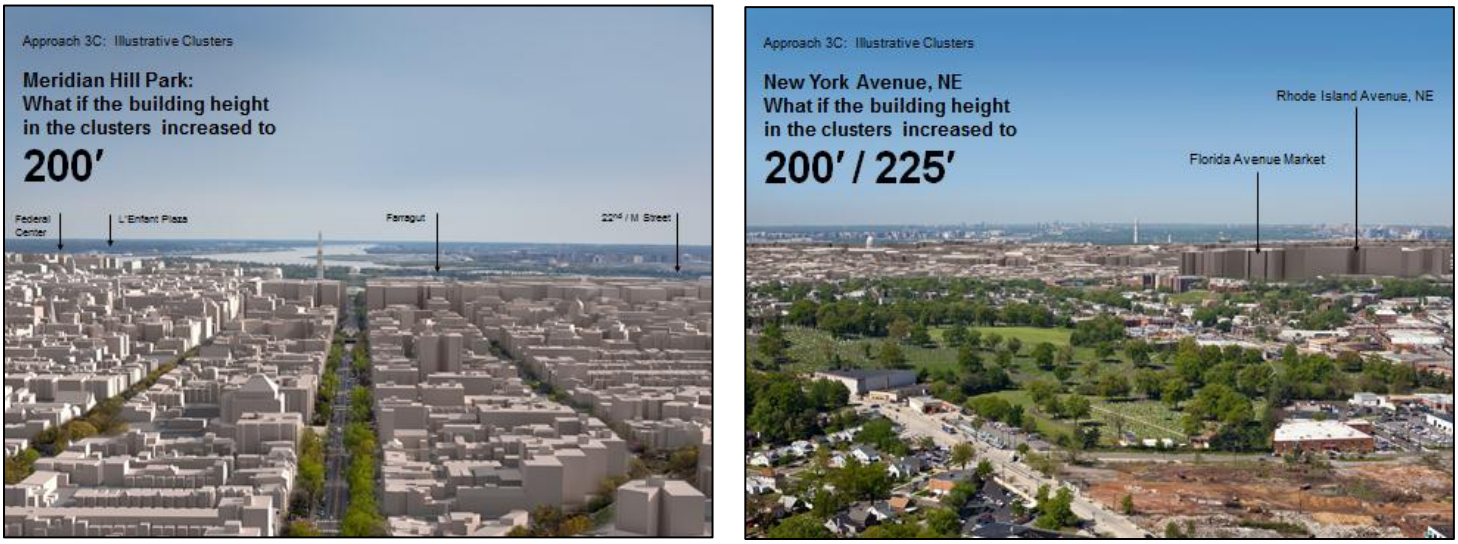


Figure 15: Approach 3C—Raise Heights Only in Illustrative Areas

Approach 4: Raise uniform height citywide: Approach 4 most closely follows the model of the current Height Act with its citywide applicability, but would set a new height limit. If this approach is used, the heights under consideration in the study were 130, 160, 180, a maximum 200 feet inside the L'Enfant City and 225 feet outside the L'Enfant City. Figure 16 below with a view from the Jefferson Memorial illustrates a height of 200 feet for buildings inside the L'Enfant City.

Figure 16: Approach 4: Raise Uniform Height Citywide

Viewshed Protection: All of the Modeling Study approaches incorporate the need to implement some type of viewshed protection to preserve views to nationally significant structures such as the White House, the Washington Monument, and the U.S. Capitol (see Figure 17). Some models identify cases where a viewshed approach would need to be applied. Figure 18 illustrates how views to the White House would be impacted if the Illustrative Areas in L'Enfant City were allowed to raise to 200 feet. Carving out specific view corridors for protection and stepping back buildings closest to a view corridor are two ways to protect significant viewsheds. London combines a clustering approach to manage heights with a defined protected view corridor of St. Paul's Cathedral that prevents taller heights from impeding into the view corridor.

Figure 17: View of the U.S. Capitol from North Capitol Street

Figure 18: Meridian Hill View with Illustrative Clusters at 200 feet

VI. THE DISTRICT'S EVALUATION OF APPROACHES FOR MANAGING HEIGHT IN WASHINGTON, DC

A. Population and Job Growth Forecasts

The District is growing.

After decades of decline the District is now growing. The District stopped losing significant population by 1998 and started to grow rapidly after 2005. During the past five years (2007-2012) household and population growth has accelerated to 5,900 and 11,600 per year respectively. Enabling the city to grow is critical for a variety of reasons including fiscal stability and environmental sustainability. To ensure there is adequate capacity for long term growth OP compared current long range forecasts developed for local and regional transportation planning purposes with a capacity analysis of developable land at a variety of density assumptions both with and without potential changes in land use and height.

Scenarios for future growth of jobs and residents show capacity is constrained by the current height limits.

The District prepared 30-year forecasts (through 2040) of growth for population, households and jobs in five-year increments as part of the Metropolitan Council of Governments (MWCOG) Cooperative forecasts for regional transportation planning. OP's most recent officially approved forecast was Round 8.1 in 2012.

For the purposes of the Height Master Plan, the 8.1 forecast is considered the base or 'low growth' forecast. OP is currently developing a preliminary forecast for MWCOG's Round 8.3—this is considered the 'medium growth' forecast. Because of the similarity between the forecast and development capacity analysis methodology, OP also added a 'high growth' forecast that uses a simple extrapolation of growth rates over the past five years to establish a potential upper range of demand for space.

OP's forecast methodology uses a supply side technique of tracking a pipeline of projects as they progress through pre-development, construction and completion over the first two thirds of the forecast period (through 2030). The remainder of the forecast through 2040 is completed by an analysis of the remaining capacity spread out over the last two five-year increments. The feasibility of the supply side forecast is then

qualitatively validated and cross-checked based on five to 10 year historical absorption trends combined with shifts in macro-national factors such as smaller average household sizes, shifts toward urban living and changes in the nature of the work environment.

OP then uses basic multipliers to estimate how household and job growth translates into demand for space. For instance, the analysis assumes that a household on average will require 1,200 gross square feet of space in a multi-family residential development.[4]

Household Forecasts

The chart below presents the results of the household forecast scenarios. The chart shows household growth over time and the respective growth rates of each scenario.

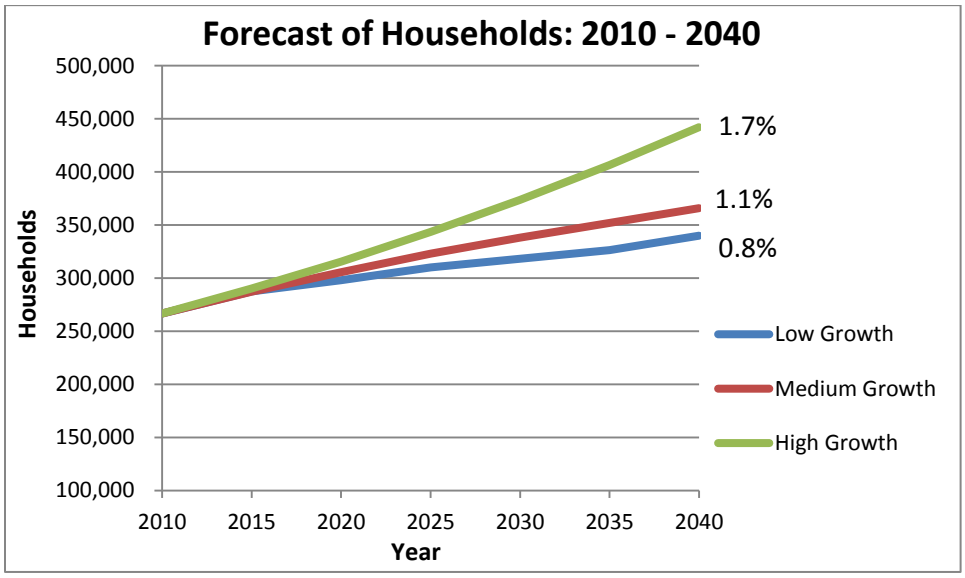


Table 1 below converts the Household Growth chart to summary totals for the full forecast period, the average annual growth and the calculated estimates of space required to absorb the demand. The space required to meet residential demand ranges between 87.8 million square feet and 210.6 million gross square feet of developed space.

[4] Current space demand is closer to 1,000 gross square feet per unit. Rapidly rising household incomes in the District versus overall smaller households push the per unit demand for space in opposite directions. However, 1,200 gross square feet was used as conservative risk adjustment.

Table 1

Household Summary Totals: 2010 - 2040			
Scenario	*Total Households*	*Annual Average*	*Residential Gross Square Feet*
Low Growth	73,200	2,440	87,840,000
Medium Growth	99,100	3,303	118,920,000
High Growth	175,500	5,850	210,600,000

Jobs Forecasts

The Jobs Forecast chart illustrates the three scenarios (low, mediums & high) and the respective rates of growth. OP is currently reviewing the assumptions of the MWCOG Round 8.3 Preliminary forecast. Current economic conditions may suggest that the forecast starts out too aggressively; however, the 3.4 percent difference between the 982,000 jobs in Round 8.1 and 1,015,000 jobs of 8.3 is negligible given the 30 year time frame.

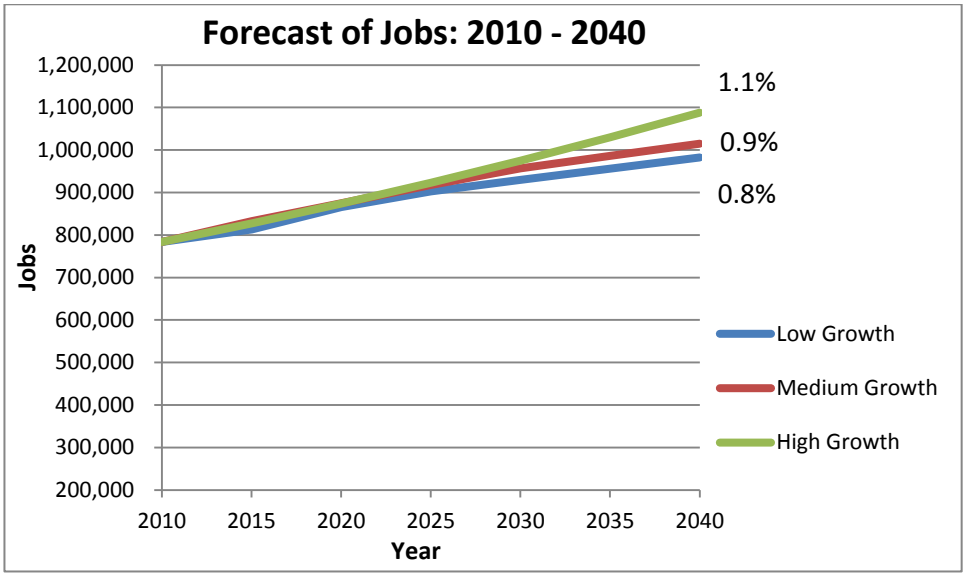


Table 2 converts the jobs growth chart into summary totals and the resulting estimated space required to absorb that demand. OP used the current average space requirements for all jobs including office, retail, and public/institutional of 350 square feet per job to

estimate the required space[5]. The square feet required to absorb the jobs demand ranges from 69.7 to 106.5 million.

Table 2

Jobs Summary Totals: 2010 - 2040

Scenario	*Total Jobs*	*Annual Average*	*Gross Square Feet*
Low Growth	199,200	6,640	69,720,000
Medium Growth	231,500	7,717	81,025,000
High Growth	304,300	10,143	106,505,000

To summarize, OP estimates that the amount of new developed space required to meet residential demand over the next 25 years could range from 87.8 to 210.6 million square feet. To meet the jobs demand over that same time period, a range of 69.7 to 106.5 million square feet would be needed to absorb that growth. In total, the population and jobs demand through 2040 could require between 157 million and 317 million square feet.

The high growth scenario, where households are forecasted to grow by 1.7% and jobs by 1.1% between 2010 and 2040, would result in a demand for as much as 317 million square feet of new space—over 210 million square feet to house the population growth and over 106 million square feet in new office space. This scenario represents more than twice as much total demand as the low-growth scenario. At the same time, the high growth scenario falls below the actual population growth rate seen in the District in just the last two years: 2.7% from 2010 to 2011 and 2.1% from 2011 to 2012. If growth continues at this pace or more over the next several years, the demand for new space could be even greater.

B. Development Capacity Analysis

The District needs future capacity to meet future demand.

[5] The average of 350 square feet per job for all jobs is based on the estimated total jobs created by the types of development projects OP tracks and the standard job densities used for transportation modeling, such as 250 square feet per office job, 400 square feet for retail jobs, and 830 square feet for public/institutional jobs such as university and hospital space.

A supply of developable space is necessary for the District to accommodate its growth. Without the ability of supply to meet demand the city would face ever increasing price pressures that would limit who could afford to live here and constrain the city's economic growth. The District is already the most expensive jurisdiction in the region as well as one of the most expensive in the nation in terms of prices/rents per square foot.

Methodology

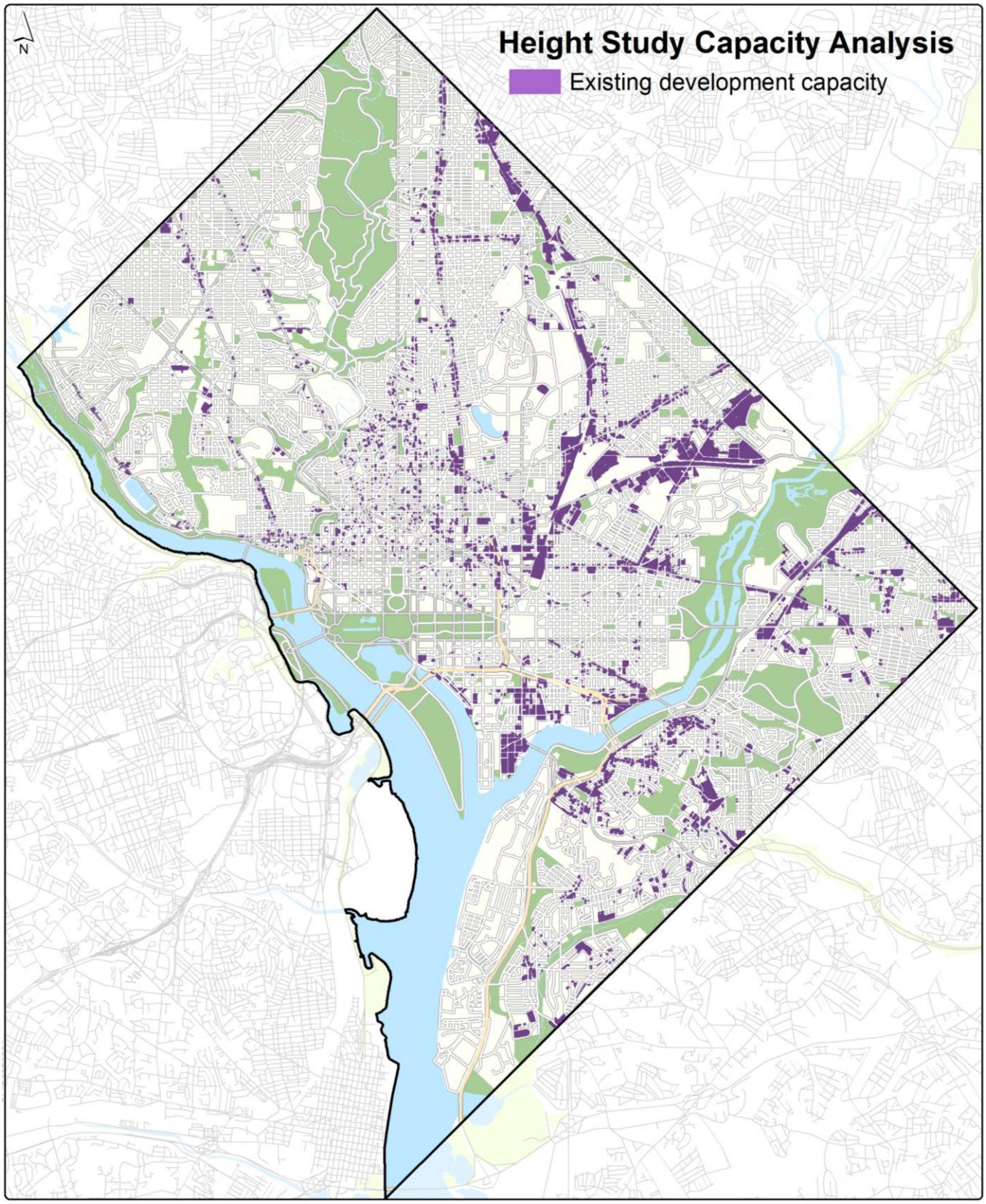
In order to ensure the District has the capability to achieve the number of jobs and households forecasted by or at least 2040 and beyond, OP reviewed the city's land use patterns, property records, development trends, and planning standards to develop a methodology for estimating the District's total capacity for growth. The process essentially created a series of filters to identify both vacant and underutilized parcels with development potential. The filters used to establish the District's base development potential[6] eliminated the following property types:

- ***Single-Family Zone Districts***: The District has very few properties with significant potential for single-family development. Only 5 percent of the 42,000 units of housing already in the pre-development pipeline are in single-family development. Therefore only properties with development potential controlled by zoning regulation of Floor Area Ratio (FAR) were considered and no land use changes to multi-family or commercial were considered.
- ***Historic Landmarks***: Historic preservation law significantly limits development potential of properties with buildings that are designated as historic landmarks, therefore all properties with local and federal landmark designations were eliminated.
- ***Land Designated for Public Use***: All properties designated as Local Public Facilities by the District's Comprehensive Plan were filtered out based on the assumption that growth will require their continued use as schools and parks. In some cases, this eliminated sites such as DC Village with significant capacity and in others where more efficient use could result in additional capacity.

[6] Note: These filters apply only to establishing the District's base development capacity. In some cases, the scenarios testing the impact of heights beyond the Height Act added some of these properties, such as certain federal properties, back in.

- ***Institutional and Federal Facilities***: Major institutions and federal properties are not governed by fixed FAR requirements, but by the campus plan and federal processes. This eliminated certain large federal facilities, especially those that have no planning efforts to establish actual capacity.
- ***Recently Developed Properties***: Required returns on investment often mean even significantly underdeveloped properties will not be redeveloped for 20 to 30 years.
- ***Transportation Rights-of-Way***: The expense of construction over railroad and highway rights of way makes the potential development capacity practically infeasible. Only two sites over existing rights-of way were included in the capacity analysis: the air-rights over the tracks leading into Union Station and those over I-395 in Downtown DC. Both of these sites are slated for future development projects.
- ***Greater than 30 Percent Built***: The final filter removed properties that were already built out to more than 30 percent of their capacity as permitted by zoning. The validity of this assumption was cross-checked by both a review of planning literature and the existing database of development projects in the pipeline. With few exceptions, all development in the pipeline of planned and conceptual projects were on properties that were built out to less than 30 percent of the FAR permitted by the zone district. The rare exceptions tended to be properties that: 1) had surface parking or other open land, which permitted additional structure versus having to demolish an existing structure; and 2) were built out to less than 40 percent of the available capacity.
- ***Quality Control on Properties with more 300,000 Square Feet Capacity***: The methodology relied heavily on data where errors resulted in significant potential capacity. OP reviewed all properties with greater than 300,000 square feet of potential capacity and removed those that resulted from clear errors in the data.

The map below shows the universe of properties that were identified by the above filters to establish the base of properties for estimating the District's remaining development potential. The areas highlighted in purple represent where existing development capacity remains after applying the above filters. Those areas account for approximately 4.9% of the total land area in the District (including parks and open space).


N
Height Study Capacity Analysis
Existing development capacity

The following steps were then applied to all those remaining properties built to less than 30 percent capacity to estimate the District's remaining net capacity for growth:

- Land area was multiplied by permitted FAR;
- The existing gross square footage built on the property was subtracted and the total was discounted by 25 percent to reflect the impact of unique site characteristics, light, air and circulation, Historic Districts that constrain redevelopment and other legal or ownership issues that result in a property never redeveloping during the given time horizon. Therefore the 25 percent discount reflects two factors affecting development. First, OP determined from analyzing recent developments that their average build out was 85 percent of the theoretical zoning capacity or a loss of 15 percent; and second, OP estimated that another 10 percent was lost to properties that do not redevelop at all within the time frame. Examples of the latter could include churches, institutional uses, family interests and/or clouded titles.

Development Capacity under Current Scenarios & Modeling Study Scenarios

OP developed three base scenarios under the current Height Act and also calculated development capacity for the Modeling Study's four approaches to manage height. These scenarios use properties with FAR in the analysis because: 1) there is very little vacant land zoned R-1 through R-4; 2) the properties that are vacant add very little capacity in terms of the percent of potential new units compared to lots governed by FAR; and 3) estimating capacity is a function of the efficient layout of lots and streets and not simply multiplying land area and FAR, making it almost impossible to estimate capacity across thousands of lots.

The three scenarios under the existing Height Act (see Table 3) include:

1. **Current Capacity Under Current Zoning**: This scenario included all properties identified by the methodology above built out to their matter-of-right FAR permitted by the zone or overlay. The analysis did not use the density permitted for Planned Unit Developments (PUD) because PUDs represent a smaller subset of development and tend to be limited larger parcels. OP estimates that under current zoning there is a total of 136.9 million square feet of potential capacity in parcels designated for Medium to High Density Residential and/or Commercial Development by the Comprehensive Plan and 253.0 million square feet for all

properties that were determined to have development capacity by the methodology above. When discounted by 25% to control for factors that may limit sites' full potential, these numbers are reduced to 102.7 and 189.8 million square feet respectively (see "Achievable Capacity" columns).

2. **Maximum Capacity Under the Comprehensive Plan, with Zoning Changes**: This scenario uses the same set of properties, but tests the capacity as if all development sites were zoned to the densest zone permitted by their Comprehensive Plan Land Use designation (e.g, Medium Density Commercial zoned up to an average of 5.5 FAR). This scenario resulted in total potential capacity of 177.2 million square feet in Medium to High Density Areas and 360.0 million square feet across all properties included in the analysis. These numbers are reduced to 132.9 million square feet of capacity in Medium to High Density areas and 270.0 million square feet for all properties studied when the 25% discount is applied.

3. **Further Capacity up to the Height Act Limits**: This final base capacity scenario limited the properties to only those designated Medium to High Density Residential or Commercial, which were the areas studied in the Modeling Study. In the downtown core this scenario kept the FAR at the current FAR to height ratio of 1 FAR to 13 feet in height. In all other areas it used a ratio of 1 FAR to 15 feet in height, or 8.6 FAR within 130 feet in response to the proximity to lower density land uses. This scenario resulted in 221.8 million square feet of development potential, which is reduced to 166.4 million square feet of expected potential when limiting factors are taking into consideration.

Table 3: Theoretical & Achievable Development Capacity under Current Zoning, Comprehensive Plan & Height Act

Current Scenarios	Medium & High Density Lots		All Lots With Capacity	
	Theoretical Capacity	Achievable Capacity	Theoretical Capacity	Achievable Capacity
Current local zoning	136.9	102.7	253.0	189.8
Current District Comprehensive Plan	177.2	132.9	360.0	270.0
Under current federal Height Act (full build-out at 130 ft)	221.8	166.4	NA	NA

***Notes**: Values in terms of millions of square feet.*

The second set of scenarios[7] tested the potential capacity that could be achieved under the Modeling Study's approaches to manage height (see Table 4). Some of these approaches use four alternative height increments (130, 160, 180, 200 or 225 feet). All of the approaches under the Modeling Study were limited only to areas of the city designated on the Comprehensive Plan Future Land Use Map as Medium to High Density Residential and Commercial, with several categories of properties excluded, including federal properties and historic landmarks.

A key assumption is the potential additional FAR that is enabled by additional height beyond the Height Act. For instance, permitted FAR in Downtown DC ends up in a ratio of 1.0 FAR to 13 feet in height. OP's research of other major cities[8] found that the permitted FAR to height ratio was only 1.0 FAR to 20 feet in height. OP used as a starting point a ratio of 1.0 FAR to 15 feet in height. This is comparable to FARs achieved in areas of the city such as in the Capitol Riverfront neighborhood near the baseball stadium. After further planning and urban design principles are applied such as scale and shadow studies, the resulting setbacks or other techniques might likely reduce the achievable FAR closer to the 1.0 to 20 feet found in other cities.

The calculations in Table 4 below represent 100 percent of the potential or theoretical capacity for each of the Modeling Study approaches. Once again, when 25% of the capacity is discounted to reflect the impact of unique site characteristics, light, air and traffic circulation, Historic Districts and other factors, the theoretical capacity of these numbers are reduced to an estimate of achievable density for the areas studied. Note that a higher height to Floor Area Ratio might allow more of the development capacity to be achieved.

[7] See Section V.B. Note: Allowing occupancy of penthouse levels was not tested due to the minimal increase in capacity it would permit.

[8] OP researched San Francisco, Boston, Chicago, Arlington

Table 4: Theoretical Development Capacity by Modeling Study Approach

Modeling Study: Approaches to Manage Height ** ***(Medium & High Density Areas ONLY)***	**Base Zoning (SF)** ***(no change to FAR or Height)***	**Gross Development Capacity (SF)**				**Net Development Capacity (SF)**			
1A: Status Quo--no change to Height Act (includes full build out at 130 ft)	136.9	221.8				84.9			
1B: Allow penthouse occupancy (*148.5 ft*)	Minimal	Minimal				Minimal			
2: Reinforce relationship between building height & street width *(Max Height = 1.25* ROW)*	136.9	258.4				109.1			
Modeled height increments		***130 ft***	***160 ft***	***180 ft***	***200 ft/ 225 ft****	***130 ft***	***160 ft***	***180 ft***	***200 ft/ 225 ft****
Approach 3: Raise height in targeted areas									
3A: Raise height only in L'Enfant City	78.1	119.6	158.0	182.2	208.0	41.50	79.9	104.10	129.90
3B: Raise height only in Topo Bowl	11.8	26.2	34.2	39.1	49.9	14.40	22.4	27.30	38.10
3C: Raise height only in illustrative areas *(Also includes **Federal** areas)*	49.4	67.9	87.7	100.1	118.7	18.50	38.3	50.70	69.30
4: Raise uniform height citywide	136.9	321.9	419.6	485.6	607.4	185.00	282.7	348.70	470.50
New Approach #5: Raise uniform height outside L'Enfant City***	58.8	202.3	261.6	303.4	399.4	***143.50***	***202.8***	***244.60***	***340.60***
	Values in million square feet								

** **Note**: Modeling Study used 200 feet maximum height within L'Enfant City; 225 feet maximum outside L'Enfant City*

*** **Note**: All Analyses in Modeling Study include **ONLY medium and high density commercial and residential areas** as defined by the Comp Plan, except Approach 3C, which also includes certain **Federal** areas.*

******Note**: New Approach 5 was not modeled directly as a component of the Modeling Study. The calculations are derived by subtracting approach 3A (Raise height only in L'Enfant City) from Approach 4 (Raise height citywide).*

***General Note:** This analysis presents the max (100%) development capacity.*

Demand Forecast & Capacity Analysis Conclusions

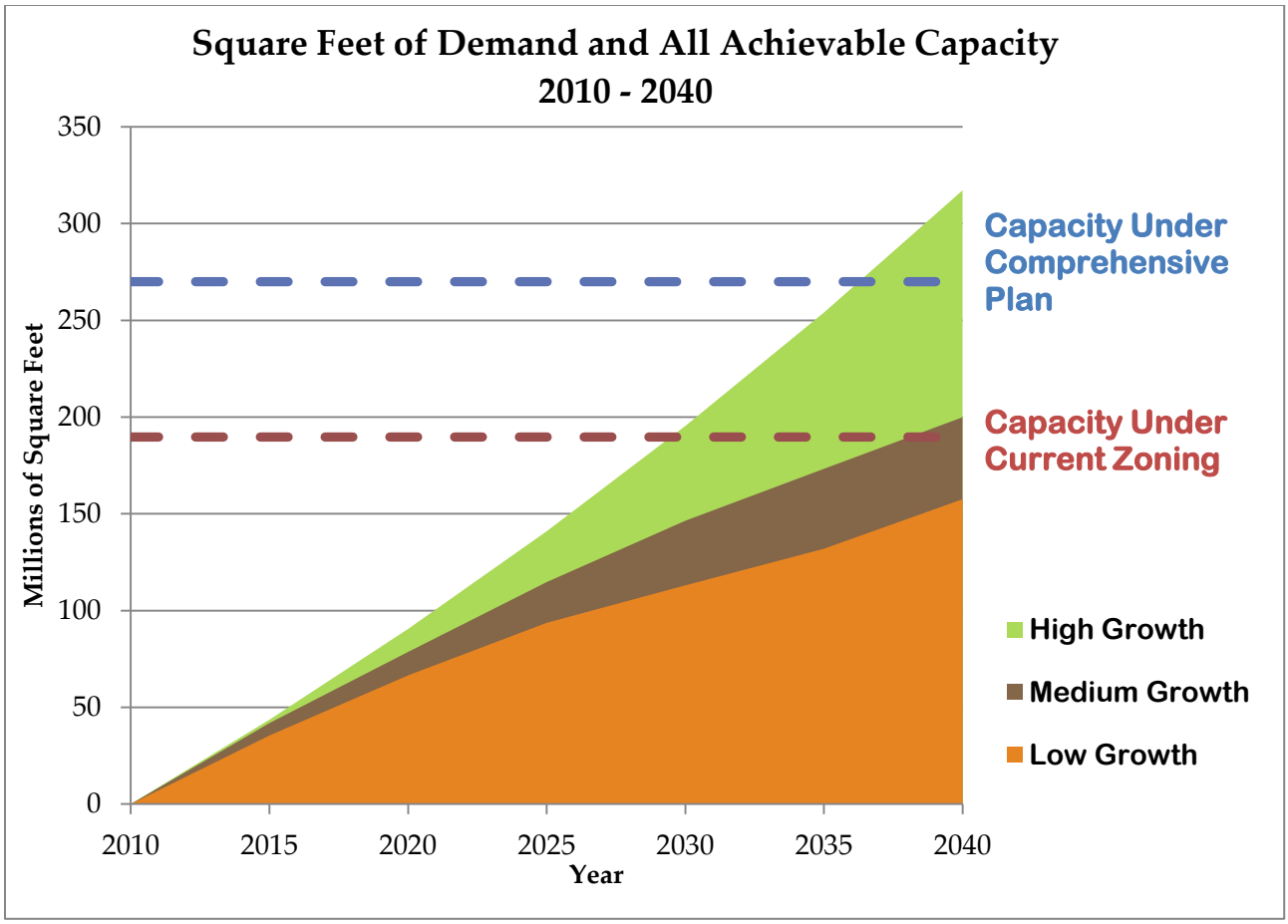
OP estimates a range of growth scenarios through 2040 that will require from 157 million to 317 million square feet to meet the forecasted demand for residential and non-residential space (see summary Table 5 below). Under current zoning we have less than a 30 year supply of development capacity. It is important to reiterate the methodology used the matter-of-right FAR permitted by zoning[9]. OP does not expect significant increases in capacity from PUDs because of the limited set of properties that can qualify for the PUD process due to the size eligibility. The vast majority of residential units and non-residential square footage is produced outside of the PUD process. This means PUDs under current zoning have some ability to absorb additional demand above this matter-of-right scenario, but not enough to extend our capacity to absorb additional demand significantly beyond 2040.

Table 5: Developable Space Demand by Growth Forecast (2010 to 2040)

Growth Forecast	*Household Demand*	*Jobs Demand*	*Total Demand*
Low Growth	87,840,000	69,720,000	157,560,000
Medium Growth	118,920,000	81,025,000	199,945,000
High Growth	210,600,000	106,505,000	317,105,000
		in square feet	

Looking at all lots with developable capacity, the graph below demonstrates that under current zoning the District has barely enough achievable capacity to meet the next 30 years of demand. Additionally, there is insufficient capacity to meet the 'high growth' demand even under the circumstance where the city rezones all land eligible under the current Comprehensive Plan. Even under just 30 years of forecasts, the current height limits constrain our ability to meet our expected growth.

[9] Inclusive of the 20 percent FAR bonus for residential development provided by the District's Inclusionary Zoning Program.



VII. THE ECONOMIC RATIONALE FOR CHANGING THE HEIGHT ACT

Unlike any other city in the United States, the District of Columbia has to fund and provide a range of services from a revenue base with significant constraints. The District of Columbia is a unique entity. Not only the Nation's Capital, the District provides the services of a city, county and state, all on a city budget. These additional responsibilities include, for example, addressing a high burden of poverty and social service needs that are normally paid for by a broader state-level tax base. The District also must meet the service needs of one of the largest commuter populations in the country, including transportation, police, fire and emergency management. With nearly 50% of land in the District off the tax rolls, due to in large part to federal and non-profit ownership, the District's budget is structurally imbalanced. Studies by the federal Government Accountability Office and others identified another major reason

the District's budget is structurally imbalanced. Congress prohibited through the Home Rule Act the District taxing income at its source—making 70% of the income earned in the District non-taxable by the city.

The challenges that face the city today are formidable, and it is important that we act to address them. To paraphrase a former Director of the National Capital Planning Commission, William Finley: "In the next fifty years, this city can attain its role as an international capital as well as the vital center of this metropolitan region, or it can become simply a collection of national monuments surrounded by the *wealthy living in exclusive residential areas served by high-rent commercial districts that cater only to those businesses who have no choice but to be in the nation's capital*."[10]

The District's revenue structure is a hybrid of state and city taxes. However, contrary to what any state can do, the District cannot determine whom and what it taxes, and unlike any other city, it receives no state aid or compensation for the prevalence of tax-exempt property and organizations. We have a narrow tax base because nearly half our property and a significant portion of our sales are tax exempt, and—especially—because we are prohibited from taxing non-resident income. Since income earned by non-residents, mostly commuters, accounts for about two-thirds of the income earned in the city, our inability to tax that income stream is a serious restriction of resources. Moreover, because a considerable proportion of the District's population has low-incomes and lives in neighborhoods with high concentrations of poverty, the need for public services is greater and the cost of delivering them is higher than in the average community, where a broader state tax base can be tapped to address the proportionately higher city needs. For instance, the District of Columbia provides 42% of the region's subsidized housing units, although the city represents only 11% of the region's population[11]. The Government Accountability Office estimated our "structural deficit" at between $470 million and $1.1 billion annually.[12] The large number of taxes

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[10] Original quote: "In the next fifty years, this city can attain its role as an international capital as well as the vital center of this metropolitan region, or it can become simply a collection of national monuments surrounded by rundown residential areas served by second-rate business districts." The Washington Post, October 28, 1962, p. 1

[11] Metropolitan Washington Council of Governments—Affordable Housing Database, DC Office of Planning, 2012.

[12] *District of Columbia: Structural Imbalance and Management Issues*, GAO-03-666, May 22, 2003

the District imposes on its narrow tax base becomes a heavy burden for those taxpayers. According to the most recent annual report from the Office of the Chief Financial Officer, the tax rates in the District of Columbia are among the highest in the nation. Of 12 types of taxes compared, District tax categories where rates are higher than in most of the states include: cigarette; corporate income; individual income; deed recordation; motor vehicle excise; motor vehicle registration fees; and sales and use.[13]

Previous studies published by the Brookings Institute have estimated that our tax burden results in at least a 25-percent higher cost of doing business than in the surrounding area, discouraging location in the District and undermining our competitiveness.[14]

The District's financial health and fiscal stability have been a matter of Congressional concern at various times since the passage of the District of Columbia Home Rule Act in 1973. In 1995, the federal government endeavored to undertake a multi-phase solution for the nation's capital. Congress created the District of Columbia Financial and Management Responsibility Authority (also known as the control board) and created an independent Chief Financial Officer to ensure the District's financial integrity. It also passed the Revitalization Act of 1997. Recognizing that some of the District's spending requirements are typical of states, the federal government assumed the funding of prisons and courts, a larger share of Medicaid and the accrued pension liability. Congress also ended the annual federal payment which in the past was a supplemental source of funding for the District's budget. This recognition by Congress is noted in the Revitalization Act: "Congress has restricted the size of the "District of Columbia's economy[,] . . . imposed limitations on the District's ability to tax income . . . [, and that] the unique status . . . as the seat of the government . . . imposes unusual costs and requirements."[15]

The District cannot achieve long-term fiscal stability unless it has a growing and secure revenue base. One effect of the Revitalization Act was to shift the District toward

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[13] *Tax Rates and Tax Burdens in the District of Columbia -A Nationwide Comparison*, Office of the Chief Financial Officer, District of Columbia, September 2011.
[14] Ó'Cléireácain, Carol. *The Orphaned Capital: Adopting the Right Revenues for the District of Columbia*, Brookings, 1997.
[15] Ibid.

greater dependence on taxes as a source of revenue. The Revitalization Act eliminated the federal payment ($667 million in FY1997), a discretionary revenue with flexibility on how to spend it, and increased the percentage of the federal contribution to the District's Medicaid program to be more in line with the percentage of the federal contribution to other jurisdictions' Medicaid programs. This switch had the effect of reducing revenue to the District and shifting the source of the discretionary revenue to taxes (on residents and businesses), which were 53% of the budget in FY1997 while they carry 82% of the budget in FY2013.

There are two essential ways for the District to get more public resources:

1. ***Continue the efforts to grow the District's own tax base.*** This is our only other option, since raising tax rates significantly is likely to drive businesses and residents out of the city and narrow the tax base further. To grow the tax base we need higher incomes earned by District residents, a higher volume of local sales, and increasingly valuable taxable commercial and residential property. This means increasing the incomes, spending and wealth of the existing population and enlarging that population. However, those efforts have real limits in the physically height-constrained and land-locked city, where growth at current rates would exhaust the supply of land and developable height within a few decades, with escalating rents and prices felt by everyone, especially working class families, long before then.

2. ***Request further federal assistance:*** For instance, Congress maintains control over numerous aspects of District governance, including restrictions that limit the height of buildings in the city. Moderate changes in the L'Enfant City that still protect and acknowledge the federal interest in the monuments and memorials would be enabled by simply removing on certain streets and avenues the 130 foot limit that originated because of 19th century fire safety concerns. Outside the L'Enfant City, there are relatively fewer federal resources, and historic federal resources there can be and are currently protected under both federal and local historic preservation law. Other individual federal resources outside of the L'Enfant City can be protected through several existing mechanisms controlled or significantly influenced by the federal government, including but not limited

to the Comprehensive Plan and zoning. This type of federal assistance would allow the District to help itself.

Each is necessary to the other. To grow the tax base we need more people living in the city. The District certainly used to have more--about 200,000 more. The population lost was disproportionately middle-income working families, both black and white. It is essential that we woo them back, not only to grow the tax base, but also to be customers for neighborhood stores and to be advocates for improving the District's schools and other services. We recognize that we need many different kinds of people in the city—including young singles, childless couples, and empty nesters. Certainly higher income people with no kids contribute to a more balanced budget. They pay taxes, and they don't use many services. The downside is that the influx of higher income people into newly fashionable neighborhoods creates upward pressure on rents and housing values that particularly impact low-income people, especially renters, and may force some of them out of their neighborhoods. The downsides of gentrification are a serious concern, but the answer isn't to keep higher income people out. The answer is to channel those new tax revenues into subsidies for housing and other services that will help low-income people. Another important way to ease the pressure of gentrification is to create new mixed income neighborhoods on land where few now live. Washington still has some opportunities to create new mixed-income neighborhoods around the city - some are well underway - along the SW and SE waterfronts, at Walter Reed, on the St Elizabeth's East campus, and on part of the McMillan Reservoir site, for example. Creating new neighborhoods provides a way to add to the supply of housing—both subsidized, affordable housing and market rate—without displacing anyone. The mixed-income nature of the new neighborhoods, however, won't just happen. It will take deliberate efforts and tools, such as inclusionary zoning, to make it happen.

However, the resources that are needed to make neighborhoods more livable are not just public resources. Indeed, the resources needed to improve housing and commercial properties are primarily private and non-profit resources. Many parts of the city do not have ordinary neighborhood commercial services—grocery stores, hardware stores, drug stores, dry cleaners, movies, restaurants. Those establishments closed when the middle income customers that bought their wares moved out, and the jobs they supported disappeared with them. We need them back and the broad range of private

investment and job growth that comes with revitalized neighborhoods and new businesses, retail and services.

For more than a dozen years, through a succession of three Mayors and several Councils, there has been broad agreement that a growing population in the District of Columbia, especially an increasing number of working households and families, is absolutely essential to securing the District's financial and economic future. Moreover, the only way to increase our population would be to make the District of Columbia a better place for all of its residents to live and work and raise kids. We have been systematically working to make the city a better place with tangible results.

The District of Columbia has a lot of factors under its own control to help it achieve fiscal stability and its economic well-being. The city has shown demonstrable improvements over the last decade in its fiscal health, operations, infrastructure investments and attractiveness to new residents and jobs. However, its ability to benefit from these improvements is literally constrained by the Height Act.

Strategic changes to the Height Act would provide the District more flexibility and further options for meeting its current demands and the demands of future population and job growth. These changes can help the District maximize its regional competitiveness and capture the value of any increased heights to support further investments in areas such as affordable housing and transportation. The District's goal is for greater development capacity through increased heights to make more affordable housing possible in the city and enable a higher percentage of jobs added to the city being held by District residents who would pay income taxes to the District. These outcomes would not only generate more tax revenue to support increased services and infrastructure in the city, but also support District and federal policies to balance jobs and housing that bring transportation and environmental benefits to the entire region.

The analysis of existing development capacity in Section VI indicates that the District will feel constraints on its capacity to meet the medium growth forecast within 30 years, without any changes to the Height Act. For the high growth scenario, the current capacity under existing zoning will be depleted in just 15 years. Even if the District were to change zoning across the city to create additional capacity under the Comprehensive Plan, with no changes to the Height Act, to meet high growth demand, this capacity

would be exhausted in 20 years. Constrained supply will create price pressures long before the actual development capacity is consumed. As existing capacity under the current Act becomes more limited, market rate affordable housing will disappear, while rising prices will put housing, especially family housing, out of the reach of middle class families. If no changes are made to the Height Act, the District risks then becoming primarily a city of wealthy residents and investors, not the inclusive city that can house all people—long-time residents, returning middle class families, empty-nesters and retirees, service workers, and recent college graduates.

The Height Act has benefitted the District by helping to spread development across the city in areas such as NoMa and Capitol Riverfront. However, even with these areas available for development, the District cannot meet future demand without significant changes—either upzoning much of the city's residential neighborhoods through the Comprehensive Plan or changes to the Height Act.

Even without the significant additional demand that is forecast, the District's regional and national competitiveness would be greatly enhanced by the ability to use additional height to create taller, brighter retail and ground floors, greater floor to ceiling heights in office and residential buildings and a broader range of rents in higher buildings that would allow a more diverse set of firms and residents.

In 2001, then Mayor and former Chief Financial Officer Anthony Williams made an urgent call for the city to do what it would take to grow the population by 100,000 residents, projecting that the those residents (depending on how many households had children) would increase annual city revenues by $12 to 188 million per year.[16] While the District has not yet hit the 100,000 additional residents, in the past ten years (2003 - 2012), the population has increased by more than 64,000 residents. While the District's annual revenues have varied in part because of a severe recession during those years, by 2012 annual revenues had increased by more than $2.7 billion compared to 2003. Clearly, the strategy of growing the District's population is having an impact, both on our ability to continue to balance our budget, but also to provide infrastructure and services that both keep the current population and attract the middle class back to the

[16] O'Cleireacain, Carol and Rivlin, Alice M., ***Envisioning a Future Washington***. Brookings Institute, Research Brief, June 2001.

District. However, making no changes to the Height Act would put at risk the District's ability to maintain this hard-won fiscal stability, which in turn threatens our ability to provide better services demanded by our growing resident base and to enhance the District's competitiveness in a region where its suburban neighbors are rapidly urbanizing and providing similar amenities.

VIII. DISTRICT OF COLUMBIA'S DRAFT RECOMMENDATIONS FOR CHANGES TO THE HEIGHT ACT

The Height Master Plan is a valuable opportunity to examine whether the current law, which well served this city over the last 100 years, will continue to do so over the next 100 years. For more than 50 years of those years, the city was shrinking, not growing but limits on height pushed growth into neighborhoods near downtown as downtown became more fully built out. Even those changes were during a time when the city had no or low growth. The analysis of the District's remaining development capacity under the limits of the current zoning regulations, the Comprehensive Plan and the Height Act and the expected diminution of this capacity over the next two to three decades due to increasing demand from population and job growth demonstrates a compelling need to make key changes to the current Act.

Moderate changes to the Height of Buildings Act would empower the District to continue to protect national civic, historic and federal resources under both a revised Height Act and the District's own laws and regulations while putting the city in the position to continue to expand its population and tax base, grow and stabilize its economy, diversify its employment, accelerate improvements in education, protect housing affordability and improve the quality of life for its residents, workers and visitors. The alternative approach—to maintain current Height Act restrictions—also would maintain those historic and federal protections but would result in a Washington, DC of the future where lower income and middle class residents would be priced out as housing prices due to constrained supply is affordable only to the wealthy.

It should be noted that any actual increases to building height due to a more flexible Height Act would be implemented gradually, commensurate with actual population

and job growth, and most significantly only through revisions to the District's Comprehensive Plan and zoning regulations. Both of these processes, which the District has undertaken several times successfully, require multiple opportunities for extensive public participation and input and must be approved by both District and federal entities before any actual building height changes can be implemented. The process would begin with the District consulting with the public and NCPC to identify appropriate locations for any new building height maximums. Amendments to the District Elements of the Comprehensive Plan reflecting these changes must be officially adopted by the Council of the District of Columbia following public hearings. The District transmits the Comprehensive Plan amendments to NCPC for review and approval. Upon NCPC approval, the amendments are submitted to Congress for final approval. The District-federal member Zoning Commission then must review and approve zoning amendments reflecting those approved Comprehensive Plan changes in order for new building height maximums to occur in the designated areas.

Federal protection of its interest in height takes place through NCPC's approval authority over the District Elements of the Comprehensive Plan, Congressional disapproval authority over the Comprehensive Plan legislation, and the federal government holding 40% of approval authority on the Zoning Commission which is required under federal law to adopt zoning that is "not inconsistent" with the Comprehensive Plan.

As part of its approval authority, NCPC has line-item veto power over amendments to the District's Comprehensive Plan. This veto power has been used four times during prior Comprehensive Plan updates over the last twenty years. During those instances, NCPC found a particular provision to have an adverse federal interest impact. NCPC adverse impact findings return to the DC Council for action, and Council typically modifies the amendment to address the concern. If the District doesn't modify a District Comprehensive Plan provision which NCPC finds to have an adverse federal interest impact, the provision "shall not be implemented" per the Home Rule Act and the NCPC Act.

<u>Recommendation 1</u>: Apply the Approach of Reinforcing the Relationship between Building Height & Street Width within the L'Enfant City

The District proposes that the Height Act be amended to replace the cap on citywide height limits in the current law with new limits based on the relationship between the street width and building height. Rather than using a specific number for the height cap applied citywide as the current law does, this approach, Approach 2 in the Modeling Study, would instead apply an urban design-based standard reflecting the proportionality between individual streets and their buildings to ensure a pedestrian-scaled streetscape with lots of light and air without the strictures of late 19th century fire safety limitations.

This approach would place the tallest buildings on the wide, grand boulevards that reflect the hierarchy of streets and relative building heights that were part of the L'Enfant Plan and a valued and enduring legacy of the 1910 Height Act. Approach 2 also harkens to the 1791 Building Code which reflected the vision of a hierarchy of streets and treated the avenues differently by articulating a minimum building height on those streets.

The current law mandates a 1 to 1 ratio between street width and building height, to a maximum of 90 feet, for residential streets and a 1 to 1 ratio plus 20 feet for commercial streets. The 160-ft wide Pennsylvania Avenue, NW between 3rd Street and 15th Street now has a 1:1 ratio. Under this proposed approach and applying a ratio of 1: 1.25, a 160-foot wide street would house the tallest building, up to 200 feet (see Figure 19).

Figure 19: Pennsylvania Avenue at a 1: 1.25 ratio (200 feet)

North Capitol Street, NW currently has a 1: 0.7 ratio because the District's zoning sets the height cap at 90 feet while the street is 130-ft wide. At 1: 1.25, the allowed height would be 162.5 feet. **The District recommends applying Approach 2 to the L'Enfant City using a ratio of 1: 1.25, which would result in a maximum building height of 200 feet for 160-foot wide streets.** Table 6 shows the range of possible heights using this ratio:

Table 6: Proposed Height Limits Under Approach 2 using 1: 1.25 Ratio

Street Width	New Height Limit Under Approach 2
80 feet	100 feet
110 feet	137.5 feet
120 feet	150 feet
130 feet	162.5 feet
160 feet	200 feet

<u>Recommendation 2</u>: The limits currently established in the federal Height Act should remain in place unless and until the District completes an update to the District Elements of the Comprehensive Plan where targeted area(s) that meet specific planning goals and also do not impact federal interests are identified. Under this recommendation, building heights in targeted areas may be proposed to exceed the maximums under the federal law; and these may be authorized through the existing Comprehensive Plan process, pending Congressional approval. Should such targeted exceptions be authorized through the Comprehensive Plan, the Height Act would remain in place for all other areas both inside and outside of the L'Enfant City.

The federal interest is less and much more attenuated outside of the L'Enfant City. While the Height Master Plan analysis and modeling studies serve to illustrate the impacts of additional height, they were not exhaustive nor intended to be because actual heights outside of the Center City would always be determined by an inclusive and thoughtful process through revisions to the District's Comprehensive Plan and eventually to its zoning regulations.

Significant capacity to accommodate the city's growth currently can be found outside the L'Enfant City, but, also noted previously, existing capacity is expected to be absorbed over the next three decades. The District recommends that Congress amend the Height Act to maintain current height restrictions outside the L'Enfant City but permit taller heights only if the District amends the Comprehensive Plan to identify and designate specific areas outside of the L'Enfant City where height can go taller than the current Height Act maximums. The District would adopt new land use categories, establish new height maximums for these designated areas, and map those future land uses. The District also would consult with NCPC to identify federal interests outside of the L'Enfant City that should be protected as part of the Comprehensive Plan amendment. The new Comprehensive Plan designations will undergo review and approval by the DC Council, NCPC and Congress prior to taking effect in those areas. For all other areas outside the L'Enfant City, the current Height Act maximums will remain in place.

Since NCPC must review the District's Comprehensive Plan and make a positive recommendation to Congress, and since two of the five members of the District's Zoning Commission are federally appointed, federal involvement and oversight would

continue with opportunities for review of specific locations, new zoning that allows greater height and evaluation of potential impacts on federal properties and interests outside the L'Enfant City. Therefore, there would continue to be a significant and critical federal role in establishing the heights of buildings that are actually constructed in the District of Columbia.

In addition, many federal resources enjoy historic protection under the District's local laws, such as the Historic Preservation Act, and would be subject to further review and evaluation to ensure the protection of those resources. Security, which NCPC has identified as a federal interest, is also already addressed through other means and local and federal review processes beyond the Height Act.

While the District recommends that the Height Act be amended to allow the city to determine building heights for appropriate locations outside of the L'Enfant City through its local processes, the District has yet to make any decisions about where specifically any additional height would go. These would be future conversations that can only take place if the law was amended to permit it.

Recommendation 3: Amend the Height Act to remove any federal restrictions on the human occupancy of penthouses and set a maximum height of 20 feet and one story. To ensure that the tops of any future taller buildings contribute to the use of and views from rooftops, mechanical penthouses also would be required to be enclosed within the upper floors and within the new height cap for areas inside the L'Enfant City where the ratio approach is applied.

Additional Considerations for the District's Recommendations

Viewshed Protection

Viewshed protection is a foundational component of both of the District's draft recommendations for changes to the Height Act. Civic structures and related views contribute to the unique character and attractiveness of Washington, DC. The protection of viewsheds is not only a federal but also a local interest. The District is firmly committed to protecting the majestic views to nationally significant buildings and monuments. In fact, the District already has local protections in place to protect

important viewsheds. The District's zoning code, for example, limits height on 16th Street, NW to 90 feet, lower than what is permitted under the Height Act. This local limit is specifically intended to protect the view corridor south on 16th Street towards the White House. As noted previously, federal interests in the District are already protected by other means in addition to the Height Act.

Proposed Additional Requirements for Increased Height

Recommendations 1 and 2, if accepted by Congress to modify the Height Act, can only be implemented in the District through amendments to the District's Comprehensive Plan and its zoning regulations. In addition to these requirements, the District proposes that any increased heights allowable under a modified Height Act also be subject to:

- A new special design review by the Zoning Commission in order to better ensure, in Chairman Issa's words, "how well we build high"; and
- New Comprehensive Plan and zoning requirements that development projects that receive increased heights provide for public benefits in support of affordable housing or infrastructure.

IX. CONCLUSION

The District concludes that it is necessary, desirable and in both the federal and local interest to make balanced modifications to the federal Height of Buildings Act to allow increased height in the District of Columbia. These modifications would allow the District to secure its future as a vibrant and prosperous city with an expanded tax base that will support better services for its growing population and housing affordability, enable the District's economy to continue to diversify and attract new jobs, and maintain the city's treasured diversity. If no changes are made to the Height Act, the law's restrictions will constrain the city's growth and ability to accommodate it in a future that is forecasted to see great demand from a growing population and job base. These constraints would create a city where nationally significant structures are protected but only wealthy people could afford to live here to enjoy them.

Within the L'Enfant City the District recommends allowing some streets to have additional height in a manner that retains the characteristic relationship between street

width and building height, ensuring light, air and a human-scaled city, but uncapped by 19th century fire safety constraints. We propose to add additional protections for views around the Capitol and the Washington Monument.

Outside the L'Enfant City, the District recommends that Congress maintain the current height limits unless and until the District amends the Comprehensive Plan and its zoning code to designate areas where taller heights will be permitted. For those areas outside the L'Enfant City that are not designated for greater height beyond the current maximums, the current limits would remain in place. This recommendation acknowledges the greatly diminished federal interest outside the monumental core and the opportunity for capacity gains from potential height increases. Moreover, the federal interests that remain can be adequately protected by the continuing federal, even Congressional, role in approving the District's Comprehensive Plan and the significant federal presence on the District's Zoning Commission, both bodies of which would be required to approve any local changes in allowed building height.

The District further proposes that Congress remove federal restrictions on the human occupancy of penthouses citywide and set a maximum height of 20 feet and one story but require that mechanical penthouses be enclosed in the top floors.

The District believes that the federal interests are protected and that both federal and local interests enhanced with these recommendations, which maintain the horizontality of the iconic L'Enfant City skyline, ensure the prominence of federal monuments and landmarks by preserving their views and setting, and minimize negative impacts to nationally significant historic resources.

The future household and job growth scenarios and development capacity analysis detailed in this report demonstrate that current height limits constrain existing capacity to accommodate this growth over the next three decades and that the District requires additional capacity in the future to meet future demand. The District's final recommendations for changing the federal Height of Buildings Act will enable the city to create a supply of developable space to accommodate future growth and avoid upward price pressures on existing supply that could push out the very residents the District needs. The creation of any additional capacity through increased heights would occur through rigorous public review and approval processes with District and federal

participation. These processes would ensure that any potential height increases made possible by modifications to the Height Act would respect the Height Master Plan's core principles.

Both federal and local interests are served by having a vibrant, economically healthy, livable Capital City. However, without changes to the Height Act to enable the District to expand its tax base, protect housing affordability, make further infrastructure investments and improve our public realm, that vibrancy and fiscal stability could disappear.