Testimony Regarding Proposed Amendments to Zoning Regulations – Sustainability
Zoning Commission Public Hearing for ZC #08-06-9

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New zoning regulations promoting sustainability have the potential to bring significant changes to the District's built environment. The goal as asserted by the Office of Planning is "reduction of climate change inducing greenhouse gasses." My comments concentrate on the renewable energy section because that is where the pedal meets the metal by fostering responsible building practices and building operations that will have much more profound impacts on greenhouse gas production than all the car related initiatives promoted by other District agencies. I urge the Zoning Commission to adopt many of the proposals in the renewable energy section and to consider more progressive measures because the technology and cost effectiveness is advancing at warp speed and it will be very easy to quickly become retrograde in this area. According to the National Capital Region's 2008 Climate Change Report, "based on current business-as-usual projections of growth in population, housing, employment, and energy use, total emissions from energy consumption (excluding transportation)…in the [Washington metropolitan] region will increase by 35% by 2030 and 43% by 2050." This is not the time to be timid.

Context

The Green Building Act of 2006 is very limited. It doesn't take effect until 2012 and its scope impacts only new non-residential buildings greater than 50,000 sf. It requires LEED silver certification which can be achieved without providing energy efficiency or renewable energy production. As the Office of Planning points out this legislation does not guarantee any incremental improvement in greenhouse gas emissions. The Zoning Commission should not rely on it as a sufficient tool, but rather think of it as targeting the office sector and encouraging some sustainability measures that may or may not reduce greenhouse gas emissions.

The Zoning Commission has authority through the PUD process to require exemplary response to state of the art energy efficiency and renewable energy production measures. No new authority is required. But explicit zoning rules are needed for matter of right development. Many of the needed changes are probably directed to the building code, but if the Zoning Commission has authority to impose MOR energy efficiencies here are my suggestions.

Recommendation 4, Increased Energy Efficiency

This recommendation would make explicit the authority the Zoning Commission already has. Section 2403.9 (h) lists environmental benefits as a public benefit or project amenity that per Section 2403.10 must meet an acceptable standard, but more often should be superior in order to satisfy bonus area requests. Presumably, the Zoning Commission

would apply current rather than retrograde standards when assessing environmental benefits. Unfortunately, the proposed recommendation only asks the Zoning Commission to "consider requiring cutting-edge energy efficiency standards" for PUDs. The Zoning Commission should adopt the Architecture 2030 standard which aims to reduce building energy consumption by 50% by 2010 and achieve carbon neutrality by 2030. The challenge has been adopted by the U.S. Conference of Mayors, the American Institute of Architects, and the Green Building Council. Alternatively, the Zoning Commission could require PUD applications to incorporate the most progressive standard for energy efficiency. In addition, the Zoning Commission should incorporate EPA's Energy Star standards for all PUDs. Building operations are a significant contributor to greenhouse gas emissions and this program provides a blueprint for determining a baseline target for building energy performance based on the type of building and the region. Any development seeking bonus densities through inclusionary zoning should be required to meet Energy Star standards, which focus on whole building energy efficient systems as well as individual items like programmable thermostats, energy efficient washing machines, dishwashers, etc. What's the point of providing affordable housing that isn't energy efficient and thus, results in higher than necessary energy bills? Buildings that meet Energy Star standards use up to 35% less energy than conventional buildings and generate 35% less carbon dioxide.

Recommendation 5, Outdoor Lighting

Here the Office of Planning is clear that model industry lighting standards should be adopted by the Zoning Commission. Since OP does not limit the application to any particular building type or size, the Zoning Commission should apply the light standards for all multi-family residential and all non-residential development projects, including matter of right and PUDs. In the case of PUDs, the Zoning Commission can impose these standards now. The Office of Planning should include an evaluation of a PUD lighting plan in its report on PUD applications and the Zoning Commission should stipulate the approved lighting plan in its order. Too often PUD applicants expect to control the lighting of projects in order to maximize marketing of their projects. The Zoning Commission should balance this desire with the public's interest in reducing building energy consumption, reducing light pollution, and preserving quality of life for residents who may not appreciate commercial lighting during the night.

Recommendation 6, Sustainable Energy Features

Rooftop setbacks and roof coverage limits are among the least enforced zoning requirements. This recommendation provides an opportunity to tighten the purpose of the regulation and redefine a standard for exemption from the rule. The goal should be to extend good design to the rooftop. Having multiple roof structures with multiple enclosures or no enclosure contributes to a cluttered, under-designed finish on buildings. As long as developers know that the roof is an after-thought in regulatory proceedings they will argue that they can't comply with roof standards. The Zoning Commission should consider allowing exemptions from roof setbacks only for energy conservation and renewable energy production features. Standards should be developed so that these features are designed to result in the least impact on roof standards (and side yard standards if flexibility is allowed). Since this recommendation would apply to matter of

right development it is very important that zoning flexibility is offered as last resort and not as the first option. If there are compliant ways of providing sustainable energy features those should be expected and enforced as part of permit process.

Recommendation 7, Renewable Energy Generation

The consultant's report cautions that wind turbines may not have much benefit in the District. Before changing the historic skyline with these structures the Zoning Commission should require a more refined study of their applicability in terms of size and number required for an effective system, type and size of building most adaptable to this technology, and ranking of effectiveness as an alternative clean energy producer in the District. Similar guidance should be provided for solar although there seems to be consensus that solar technology can be successful in the District used alone or in combination with other clean alternative energy producers.

Recommendation 9, District Energy Systems

The Office of Planning points out that the opportunity to build a district energy system is limited to large tract developments because by definition such systems provide energy to multiple buildings. The Zoning Commission should consider requiring PUDs that involve more than one building, very large buildings, or present opportunities to share this system with existing buildings to provide these systems as a public benefit or amenity. The Zoning Commission should approach density bonuses as inherently contributing to greenhouse gas emissions beyond what would be created by matter of right building. There is a public policy inconsistency when environmental provisions in the Comprehensive Plan and other public policy initiatives aggressively promote energy conservation and efficiency while the Zoning Commission is approving bonus densities without any meaningful offsetting reductions in greenhouse gas emissions. The Zoning Commission can address this issue now with the authority it already has.

Recommendation 14, Vegetated ("Green") Roofs

I urge the adoption of this recommendation. It should however be accompanied by a definition that excludes roof gardens from the definition. There is a distinct difference between a nearly self-sustaining green roof and a maintained roof garden designed as an entertainment area or amenity for building residents. Currently, PUD applicants try to gain environmental credit for roof gardens by calling them green roofs; the Zoning Commission should put an end to that.

Recommendation 18, Green Area Ratio (GAR)

There isn't enough experience with GAR to warrant requiring it beyond commercial areas. The Office of Planning can cite only a Seattle, Washington pilot as precedent for this scheme. There it was limited to neighborhood commercial areas, and is only now being extended to some downtown areas and high-density residential zones. There is no experience in the United States with requiring GAR in low and moderate-density residential areas. These are the areas where new requirements would have the least impact while imposing cumbersome new regulations. The Office of Planning's assertion that these requirements are easy to implement is not evident from the Seattle score sheet example.

Larger, commercial projects should be re-envisioned as opportunities for less lot coverage in exchange for more sustainable design features, including green site design. It is unclear whether the Office of Planning is suggesting that storm water management requirements remove the need to encourage landscaping, green roofs, water features, and permeable paving. But I hope the Zoning Commission will consider that these requirements complement each other rather than replace one another.

Finally, all of these recommendations should be very carefully considered in historic districts. There are competing interests here and some of these recommendations might degrade or be incompatible with preserving and protecting contributing buildings or landmarks. The large buildings that contribute most to greenhouse gas emissions are outside most historic districts, so the need to balance interests may not be necessary in historic districts. The Zoning Commission should not view these recommendations as sharing the pain, but rather as targeting opportunities to maximize energy efficiency and reductions in greenhouse gas emissions.