PROPOSED COMPREHENSIVE PLAN AMENDMENT

ITEM: 2013-CW-3CP
April 23, 2014

GENERAL LOCATION: Countywide

SUPERVISOR DISTRICT: All

PLANNING AREA: All

PLANNING DISTRICT: All

SUB-DISTRICT DESIGNATION: All

PARCEL LOCATION: All

Green Building Policy Plan Amendment
For additional information about this amendment call (703) 324-1100.

PLANNING COMMISSION PUBLIC HEARING:
Wednesday, May 7, 2014 @ 8:15 P.M.

BOARD OF SUPERVISORS PUBLIC HEARING:
Tuesday, July 1, 2014 @ 4:00 P.M.

PLANNING STAFF DOES RECOMMEND THIS ITEM FOR PLAN AMENDMENT

Reasonable accommodation is available upon 7 days advance notice. For additional information about accommodation call (703) 324-1100.

MAP NOT APPLICABLE

STAFF REPORT FOR POLICY PLAN AMENDMENT PA 2013-CW-3CP

EXECUTIVE SUMMARY

This Plan amendment is an update to the existing Green Building policy in the Policy Plan volume of the Comprehensive Plan. When the existing policy was adopted in December 2007, the Board of Supervisors directed the Planning Commission to review, and recommend revisions to green building policies as may be determined by the Commission to be appropriate, two years after the adoption of the policy. That review began in November 2009. This Plan amendment was authorized as part of Fairfax Forward in July 2013.

The scope of the items reviewed and researched in the drafting of this recommended Plan amendment have been guided by the Planning Commission Environment Committee's questions and concerns. Staff has provided research and analysis, as well as determining areas of the policy requiring clarification, based on staff experience with the implementation of the adopted policy. With extensive issue identification, research, collection of public comment, and staff analysis and response to those comments, this proposed Plan amendment has undergone significant review by the Planning Commission's Environment Committee.

The current Green Building policy applies to any development or redevelopment subject to a zoning proposal, and encourages commitments to the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED®) rating system or a comparable green building rating system. It also encourages commitments to ENERGY STAR® qualification for homes and creates an expectation for such commitments when zoning proposals seek development at the high end of the plan density range. The policy encourages green building certification throughout the county, but creates an expectation for green building commitments (LEED certification or equivalent) for zoning proposals for nonresidential development and for multifamily residential development of four or more stories in the Tysons Corner Urban Center, Suburban Centers, Community Business Centers and Transit Station Areas when the zoning proposals seek one of the following: development in accordance with Plan options, development involving a change in use from what would be allowed under existing zoning, development at the Overlay Level, or development at the high end of the planned density/intensity range.

The Planning Commission's Environment Committee discussed and recommended several modifications to the policy, including:

- Updating the policy to reflect advances in available green building rating systems, including a more holistic focus on green building design for residential development and not just ENERGY STAR qualification;
- Clarifying the emphasis of the policy to be on individual buildings rather than site/neighborhood design;
- Adding support for reuse of and greening/retrofitting of existing buildings;
- Adding support for solid waste and recycling management practices;
- Adding language to encourage the use of natural lighting;

- Creating a definition of "equivalent" for alternate rating systems other than those noted in the policy (e.g. LEED);
- Removing a limitation on the application of a green building expectation for multifamily residential proposals relating to number of stories;
- Adding support for energy and water usage data and performance monitoring;
- Adding support for periodic regional and local evaluations of outcomes achieved though green building efforts;
- Adding support for higher levels of green building performance when proposed developments have relatively high levels of intensity or density (both residential and non-residential);
- Adding Industrial Areas to the areas of the county with an expectation for a green building commitment;
- Adding green building guidance for development that is being pursued through public-private partnerships on land that is leased or provided by the county; and
- Adding support for infrastructure for electric vehicle charging.

The included draft Plan amendment, endorsed by the Planning Commission, details these changes. Staff recommends that the Policy Plan of the Comprehensive Plan be revised to reflect these modifications.

BACKGROUND

History of the Review and Process

At the time of the initial Green Building Policy adoption in December 2007, the Planning Commission was directed to review the policy after two years to assess the efficacy of the policy as well as to determine if any revisions were necessary, given that the green building field is rapidly evolving.

The review began in November 2009. Staff and the Planning Commission's Environment Committee began a series of discussions to identify issues associated with the use and implementation of the policy. These issues reflected staff's experience with using the policy for two years (at the time), as well as changes to the rating systems and technological evolutions in the green building field. A list of stakeholders comprised of members of the development community, the environmental community, civic and community associations, as well as county staff was prepared, and all stakeholders were notified of the Environment Committee meetings and subsequent public meetings.

The Environment Committee and staff discussed these issues from November 2009 through June 2011. To support this review, Department of Planning and Zoning (DPZ) staff researched items of interest and other county staff from the Department of Public Works and Environmental Services (DPWES) provided expertise on various issues. During this process, the Planning Commission's Environment Committee expressed the expectation that these discussions would lead to an amendment of the current Green Building Policy Plan language.

A first draft of a Strawman of the potential policy guidance was prepared in July 2011, with two public meetings, in July and September 2011, held to invite stakeholder input. After the stakeholder input was received, staff prepared a comment response document, which was then reviewed with the Environment Committee in a series of meetings from November 2011 through October 2012. This response document, detailing the several dozen comments received and the staff responses to each, is available here: http://www.fairfaxcounty.gov/planning/pdf/greenbuildingcommentmatrix.pdf. This document was reviewed and each comment and its response were discussed during the Planning Commission Environment Committee's review.

At the conclusion of those meetings, a second Strawman was prepared in December 2012, detailing potential changes to the policy language that reflected the stakeholder input and Environment Committee discussion and recommendations. At various times in the process, the Board of Supervisors Environmental Committee and the Environmental Quality Advisory Council (EQAC) were updated on the progress of the review. The second draft Strawman was completed in December 2012.

Following the formal authorization of a Plan Amendment by the Board of Supervisors in July 2013 as part of the Fairfax Forward process, the Planning Commission Environment Committee met to work through remaining outstanding issues. One topic of continued discussion was policy b., which identifies the geographic areas where zoning proposals may be subject to this policy. This issue was resolved by a recommendation to retain the existing approach. The second outstanding issue was policy f., which details public-private partnerships. It remained consistent in intent with the Strawman language but substituted the word "applicants" for the phrase "private companies" for clarity. With changes for clarity, as noted in the Analysis section, the recommended Policy Plan language in this staff report reflects the committee's recommendations known as the second draft Strawman with the minor change determined during the last meeting in November 2013.

The Current Green Building Policy

The current policy was adopted in December 2007 to both strengthen Comprehensive Plan guidance in regards to air quality issues, and to add support for green building practices in the Comprehensive Plan. It was based on the best research, rating systems, and green building technologies available during the time of the Plan amendment process.

The currently adopted policy:

- Applies to development and redevelopment;
- Encourages commitments to the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) rating system OR the equivalent;
- Encourages commitments to ENERGY STAR qualification for homes and creates an expectation for such commitments when zoning proposals seek development at the high end of the plan density range; and
- Creates an expectation for green building commitments (LEED certification or equivalent) for zoning proposals for nonresidential development and for multifamily residential development of four or more stories in Tysons, Suburban Centers, Community

Business Centers and Transit Station Areas when the zoning proposals seek one of the following:

- Development in accordance with Plan options
- Development involving a change in use from what would be allowed under existing zoning
- Development at the Overlay Level
- Development at the high end of the planned density/intensity range.

MITRE Report Recommendations

As part of a proffer for RZ 2009-PR-011, the MITRE Corporation produced a report on energy efficient building technologies, specifically in regards to Tysons Corner. The report was transmitted to the Board of Supervisors and Planning Commission in May 2013, in the period between when the second draft Strawman had already been completed and when the amendment was authorized through the Fairfax Forward process. The recommendations in the MITRE report were referred by the Board of Supervisors to the Planning Commission, and the Planning Commission's Environment Committee began its review of this report in February 2014. Generally, some of the MITRE recommendations are consistent with both the current adopted policy and the recommended Plan guidance, specifically the recommendation to use LEED as a design and performance guideline, and support for the ENERGY STAR rating system. However, the MITRE recommendations do differ in some ways in regards to the recommendations for energy monitoring and use of the Designed to Earn ENERGY STAR (DEES) rating system. After the February 2014 presentation to the Planning Commission's Environment Committee it was determined by the committee that the MITRE recommendations would be reviewed in a process separate to this amendment, and following that review, if needed, a follow-up Plan amendment could incorporate any recommended changes.

ANALYSIS

Issues Identified for Review and Analysis

Many issues were considered as part of the Planning Commission Environment Committee's review. Some were minor clarifications or additions, such as examples of supported green building technologies. The Planning Commission's Environment Committee discussed and recommended several modifications to the policy, including:

- Updating the policy to reflect advances in available green building rating systems;
- Defining "equivalent" for alternate rating systems other than those noted in the policy (e.g. LEED);
- Adding support for energy and water usage data and performance monitoring;
- Adding support for higher levels of green building performance when proposed developments have relatively high levels of intensity or density (both residential and non-residential;
- Adding Industrial Areas to the areas of the county with an expectation for a green building commitment;

- Adding green building guidance for development in public-private partnerships; and
- Adding support for infrastructure for electric vehicles.

Greater Availability of Green Building Rating Systems

Since the adoption of the 2007 Green Building policy, there have been many advances in the available rating systems, technologies, and strategies available in green building. The policy specifically references LEED, for both residential and non-residential development, and ENERGY STAR, for residential construction. As the rating system market has substantially changed, there are new options, particularly for residential development. Rather than specifically name the rating systems that have developed, characteristics of acceptable rating systems are defined. These characteristics for residential development reflect the availability of rating systems incorporating more comprehensive green building elements that are no longer solely based on energy. For non-residential development, the issue of equivalency (discussed in a following section), is defined more clearly so as to provide more possibilities, dependent on the specifics of the proposed development.

Definition of "Equivalent"

The current policy discusses a goal of LEED certification or equivalent. However the policy does not explicitly determine what an equivalent to LEED may be. In the time after the adoption of the policy, staff was asked to make equivalency determinations on other green building rating systems. During these determinations, it was realized there was uncertainty in the development community about what might be accepted, and there was concern that there may be inconsistent equivalency determinations. The LEED system has been selected based on the strength of the third-party, independently verified assessments of the comprehensive green building components of a building. Therefore, to be equivalent, a program should have these characteristics. The program should also be nationally or regionally known. The policy guidance recommended in this staff report clearly states what is to be considered equivalent to the LEED program.

Green Building Performance Tied to High Levels of Intensity/Density

In its discussions, the Planning Commission's Environment Committee considered whether it would be appropriate for both residential and non-residential projects proposing exceptional intensity or density to provide higher than basic levels of green building certification. Commitments to higher levels of performance in other aspects of the development (e.g. stormwater) are often offered during the zoning process for proposals with exceptional intensity or density. Per the committee's recommendation, this Plan amendment would establish an expectation for a higher level of commitment than a basic green building certification for both residential and non-residential development proposals with exceptional intensity or density.

Industrial Areas

The adopted Green Building policy uses the Concept for Future Development, as detailed in the Comprehensive Plan, to determine the geographic areas of expectation for a commitment to a

green building certification (policy b.). This list did not include the category of "Industrial Areas" at the time of adoption as it did not seem likely that development in these areas would be of an appropriate type and use such that the policy would be applicable. In the years following the policy's adoption, uses that were identical to uses in other areas of the county (e.g. hotels) were being developed in Industrial Areas. To ensure consistency in the consideration of zoning applications, the recommended policy guidance in this staff report adds Industrial Areas to the list in policy b. where there is an expectation for a commitment to a green building certification.

Energy and Water Usage Data / Performance Monitoring

The committee discussed the question of whether a green building, once built, continues to be green throughout its lifespan – specifically, is the energy and water usage of the building lower than that of a traditionally-constructed building? To determine this, data would need to be obtained and analyzed. While recognized as a valid line of inquiry, both staff and the committee had several concerns with how such research might be conducted and implemented, and what the results might show and how they might be used. Specific questions about determining the audience for these data (the building owner/operator, the county, the public) and responsibility for collecting, managing, analyzing, retaining/storing and accessing the data were identified but not able to be answered. More fundamental concerns such as whether the data from different buildings should be compared and, most importantly, how to establish the value of these efforts to the county and the building owners were also raised.

The Planning Commission's Environment Committee determined that while the answers to many of these questions is not yet clear, there is value to collecting the data provided they are aggregated, anonymously collected, and used solely for informational purposes. The intent should be evaluative, not punitive, with the goal of determining if energy efficiency objectives are being served through implementation of green building policy, in as much as it is possible to determine from the data being collected. There is an acknowledgment that a data point of a single building is very useful for that specific building, but that it does not definitely speak for the efficacy of a rating system as a whole or for the green building potential for other buildings either under that rating system or another. The recommended policy guidance in this Plan amendment gives support both for the general concept of performance monitoring, as well as for evaluations of outcomes of green buildings so long as these evaluations protect the privacy of the building operators and owners.

Public-Private Partnerships

Fairfax County has had a Sustainable Development Policy for Capital Projects, available here: http://www.fairfaxcounty.gov/dpwes/construction/sdpolicy.pdf, since 2007. This policy creates an expectation that county projects over 10,000 square feet obtain LEED Silver certification. Smaller projects are recommended to obtain basic LEED certification.

The current Comprehensive Plan policy has no guidance on public-private partnerships. For clarity, the policy guidance recommended in this staff report encourages applicants involved in a

public-private partnership to meet or exceed the guidelines established in the Sustainable Development policy.

Electric Vehicle Charging

The Planning Commission's Environment Committee has separately been considering the issue of electric vehicle charging infrastructure. While the committee's discussions on the electric vehicle charging issue are ongoing, and while there may or may not be additional Comprehensive Plan guidance recommended as a result of this review, there has been support by the committee for the inclusion within this amendment of Plan language that would broadly encourage provisions of, or readiness for, charging stations and related infrastructure for electric vehicles, particularly for those residential uses where other charging opportunities are not available

RECOMMENDATIONS

The following recommendations were incorporated into the draft Plan amendment that was endorsed by the Planning Commission for consideration through the public hearing process. They are supported by staff and have been incorporated into the proposed amendment:

- Clarifying that the emphasis of the policy has always been on individual buildings, not site/neighborhood design;
- Adding support for reuse of and for greening/retrofitting existing buildings;
- Adding language to encourage energy and water usage data collection and performance monitoring, as well as participation in regional and local evaluations of outcomes;
- Adding language to encourage the use of natural lighting;
- Adding support for solid waste and recycling management practices;
- Defining "equivalent" in reference to green building rating systems;
- Removing a limitation on a green building expectation for multifamily residential proposals relating to number of stories, as rating system eligibility requirements have changed;
- Adding support for higher levels of green building performance when proposed developments have relatively high levels of intensity or density (both residential and non-residential);
- Updating the range of residential green building rating systems available for use, recognizing the more comprehensive systems now available, and revising the related policy to focus more holistically on green building design and not just ENERGY STAR Qualification;
- Adding Industrial Areas to the areas of the county with an expectation for a green building commitment;
- Clarifying expectations for public-private partnerships; and
- Adding support for infrastructure for electric vehicle charging.

RECOMMENDED POLICY PLAN AMENDMENT

Staff recommends that the Environment Section of the *Policy Plan* be revised as follows:

MODIFY:

Fairfax County Comprehensive Plan, 2013 Edition, Policy Plan, Environment Section as amended through February 12, 2013, pages 19-21, as follows:

RESOURCE CONSERVATION AND GREEN BUILDING PRACTICES

The energy shortage in the United States in the 1970s highlighted the finite nature of our natural resources. Since the 1970s, efforts have been pursued at the federal level to enhance energy efficiency and the efficient use of water resources. While such efforts are best addressed at the federal level, local efforts to conserve these resources should be encouraged. Recent events and trends have highlighted the increasing need for energy and resource conservation and efficiency, greenhouse gas reduction and green building practices. Many jurisdictions are now engaging in community energy planning and other strategies to best use available resources.

The "green building" concept provides a holistic approach to the reduction of adverse environmental impacts associated with buildings and their associated facilities and landscapes.

Objective 13: Design and construct buildings and associated landscapes to use energy and water resources efficiently and to minimize short- and long-term negative impacts on the environment and building occupants.

Policy a. In consideration of ~~Consistent with~~ other Policy Plan objectives, encourage the application of energy conservation, water conservation and other green building practices in the design and construction of new development and redevelopment projects. These practices may ~~can~~ include, but are not limited to:

- Environmentally-sensitive siting and construction of development;
- Application of low impact development practices, including minimization of impervious cover (See Policy k under Objective 2 of this section of the Policy Plan);~~.~~
- Optimization of energy performance of structures/energy-efficient design;~~.~~
- Use of renewable energy resources;~~.~~
- Use of energy efficient appliances, heating/cooling systems, lighting and/or other products;~~.~~
- Application of best practices for water conservation, ~~techniques~~ such as water efficient landscaping and innovative wastewater technologies, that can serve to reduce the use of potable water and/or reduce stormwater runoff volumes;~~.~~
- Reuse of existing building materials for redevelopment projects;~~.~~
- Recycling/salvage of non-hazardous construction, demolition, and land clearing debris;~~.~~
- Use of recycled and rapidly renewable building materials;~~.~~

- Use of building materials and products that originate from nearby sources;~~.~~
- Reduction of potential indoor air quality problems through measures such as increased ventilation, indoor air testing and use of low-emitting adhesives, sealants, paints/coatings, carpeting and other building materials;~~.~~
- Reuse, preservation and conservation of existing buildings, including historic structures;
- Retrofitting of other green building practices within existing structures to be preserved, conserved and reused;
- Energy and water usage data collection and performance monitoring;
- Solid waste and recycling management practices; and
- Natural lighting for occupants.

Encourage commitments to implementation of green building practices through certification under established green building rating systems for individual buildings (e.g., the U.S. Green Building Council's Leadership in Energy and Environmental Design for New Construction [LEED-NC®] or the U.S. Green Building Council's Leadership in Energy and Environmental Design for Core and Shell [LEED-CS®] program or other ~~comparable~~ equivalent programs with third party certification). An equivalent program is one that is independent, third-party verified, and has regional or national recognition or one that otherwise includes multiple green building concepts and overall levels of green building performance that are at least similar in scope to the applicable LEED rating system. Encourage commitments to the attainment of the ENERGY STAR® rating where ~~applicable and to ENERGY STAR qualification for homes.~~ available. Encourage certification of new homes through an established residential green building rating system that incorporates multiple green building concepts and has a level of energy performance that is comparable to or exceeds ENERGY STAR qualification for homes. Encourage the inclusion of professionals with green building accreditation on development teams. Encourage commitments to the provision of information to owners of buildings with green building/energy efficiency measures that identifies both the benefits of these measures and their associated maintenance needs.

Policy b. Within the Tysons Corner Urban Center, Suburban Centers, Community Business Centers, Industrial Areas and Transit Station Areas as identified on the Concept Map for Future Development, unless otherwise recommended in the applicable area plan, ~~E~~*e*nsure that zoning proposals for nonresidential development ~~and~~ or zoning proposals for multifamily residential development ~~of four or more stories within the Tysons Corner Urban Center, Suburban Centers, Community Business Centers and Transit Station Areas as identified on the Concept Map for Future Development~~ incorporate green building practices sufficient to attain certification through the LEED-NC or LEED-CS program or ~~its~~ an equivalent program specifically incorporating multiple green building concepts, where applicable, where these zoning proposals seek at least one of the following:

- Development in accordance with Comprehensive Plan Options;
- Development involving a change in use from what would be allowed as a permitted use under existing zoning;
- Development at the Overlay Level; or

- Development at the high end of planned density/intensity ranges. For nonresidential development, consider the upper 40% of the range between by-right development potential and the maximum Plan intensity to constitute the high end of the range.

Where developments with exceptional intensity or density are proposed (e.g. at 90 percent or more of the maximum planned density or intensity), ensure that higher than basic levels of green building certification are attained.

Policy c. Ensure that zoning proposals for residential development that are not otherwise addressed in Policy b above will incorporate green building practices sufficient to attain certification under an established residential green building rating system that incorporates multiple green building concepts and that includes an ~~qualify for the~~ ENERGY STAR Qualified Homes designation or a comparable level of energy performance. ~~,where~~ Where such zoning proposals seek development at or above the mid-~~the high end~~ point of the Plan density range, ~~and where broader commitments to green building practices are not being applied~~ ensure that county expectations regarding the incorporation of green building practices are exceeded in two or more of the following measurable categories: energy efficiency; water conservation; reusable and recycled building materials; pedestrian orientation and alternative transportation strategies; healthier indoor air quality; open space and habitat conservation and restoration; and greenhouse gas emission reduction. As intensity or density increases, the expectations for achievement in the area of green building practices would commensurately increase.

Policy d. Promote implementation of green building practices by encouraging commitments to monetary contributions in support of the county's environmental initiatives, with such contributions to be refunded upon demonstration of attainment of certification under the applicable LEED rating system or equivalent rating system.

Policy e. Encourage energy conservation through the provision of measures which support non-motorized transportation, such as the provision of showers and lockers for employees and the provision of secure short-term and long-term bicycle parking facilities for employment, retail, institutional, and multifamily residential uses.

Policy f. Encourage applicants involved in public-private partnerships where land is leased or provided by the county to meet or exceed county guidelines for green building certification for capital projects.

Policy g. Encourage provision of or readiness for charging stations and related infrastructure for electric vehicles within new development and redevelopment proposals, particularly for residential where other opportunities are not available.-

Policy h. Encourage and participate in periodic regional and local evaluations of the outcomes achieved through the application of sustainable land use principles and technology, in coordination with the energy and resources providers and industry.

Such evaluations should be based on pooled, anonymous-source data, and should provide information helpful in decisions regarding the costs and benefits of green practices, including evaluations focused on innovative approaches and technology.