

EPA Technical Assistance for Sustainable Communities: Building Blocks

Technical Assistance Tool: Sustainable Design + Development

University City, MO

June 18-19, 2012

To: Raymond Lai, City Planning Director
Kevin Nelson, U.S. Environment Protection Agency
David Doyle, U.S. Environmental Protection Agency

From: Elizabeth Garvin, Clarion Associates

Date: July 16, 2012

Re: Sustainable Code Workshop Summary and Suggested Next Steps as Outcome of Technical Assistance

1) Overview/Background

The evening meeting on June 18 was well-attended by members of the community; city organizations; design and real estate professionals; staff and students from Washington University and St. Louis University; representatives from neighboring communities; staff from county, regional, and state government, and the mayor. Karl Brooks, EPA Region 7 Administrator attended this meeting and provided introductory remarks.

On the second day of the workshop, the working group had a rotating membership mix throughout the day, including representatives from a number of regional organizations, such as Great Rivers Greenway, Washington University, and St. Louis University; local business owners; citizens; key city department staff and city manager; and the mayor.

There appears to be significant support for sustainability measures among the workshop group and the community representatives who attended the working luncheon on Day 2. University City has already put a great deal of thought into how to become a sustainable community, including:

- Creation of the Draft Parkview Gardens Neighborhood Sustainability Plan,
- Establishment of the University City Green Practices Commission, and
- Drafting of the Sustainability Strategic Plan, currently under review by the City Council.

University City staff is knowledgeable about the many approaches to sustainability that could be incorporated in the city's regulatory process and anticipates future changes to the regulations to achieve sustainability goals.

2) Sustainability Issues Addressed during the Site Visit

The working group addressed the following sustainability topics:

- Alternative Energy Production—The use, funding, and encouragement of renewable energy sources.
- Housing Diversity/Choices— Provide a range of housing size and price choices.
- Green Infrastructure— Reduction of impervious surface area combined with native landscaping and tree replacement as well as coordination with the Metropolitan St. Louis Sewer District to increase the use of low impact design stormwater management.
- Parking— Reducing required parking ratios, establishing automatic reductions, and providing structured parking where appropriate.
- Compact Development— Establishing mixed-use zone districts, potentially targeted to specific geographic areas in the city.
- Green Buildings— Choosing and adopting a green building code to ensure that sustainability is incorporated in structures as well as site design.
- Local Food— Encouraging community gardens and setting standards for bee keeping and urban farming.

The city has already started to address more specific changes to bike and pedestrian connections through the bike and walkability report which will soon be presented to Plan Commission and City Council for consideration. Similarly, parks and open space are addressed in the University City Parks Master Plan.

3) Targeted Policies/Ideas/Strategies Discussed during the Workshop

Note: Actions are options that the community can consider; these are not requirements and it is completely up to the community to determine the viability of each idea.

A) Alternative Energy Production

The city would like to increase use of renewable energy sources such as solar, wind, and geothermal (e.g., ground-source heat pumps). This can be accomplished through the following changes:

- Remove barriers in the zoning code: side yard setback and height standards may need to allow exceptions for solar panels, wind turbines, or geothermal lines.
- Address conflicts between trees and architectural elements of structures with the placement of solar panels. This may require negotiation between landowners and a city policy determination of the relative benefits of tree canopy versus solar power.
- Increase awareness of financial incentives available from state and federal sources for the purchase and installation of alternative energy production devices.
- Explore the possibility of a Loop power plant to provide local power generation.

The city may want to review the alternative energy regulations in the following communities to determine how best to approach these topics: Berkeley, CA; Boulder, CO; Seattle, WA; and Kansas City, MO. Neighborhood –scale energy production is in its nascent stages in the United States and may be best described in the Portland, Oregon, EcoDISTRICTS project.

B) Housing Diversity/Choices

The city recognizes that there are age and income groups who would like to live in University City who cannot find a housing product to suit their requirements. The working group discussed a number of approaches to this issue, including:

- Establishing a new zone district with a smaller minimum lot size than the current 6,000 sq. ft. per lot. This will allow both the development of smaller/more affordable homes and may resolve issues related to older lots that do not meet the 6,000 sq. ft. requirement. A new district that replaces the current “prevailing pattern” approach may streamline the time it takes to obtain development approvals.
- Allow the establishment of accessory dwelling units (ADU) on lots with sufficient size. This could include existing carriage houses. An ADU provision in the zoning code would need to also include design standards to ensure that the new or converted units are designed to conform with the existing neighborhood.
- Consider infill development standards that allow homes to be built on small lots where there is substantial but not complete compliance with the zoning code.
- Look at options for more affordable senior housing choices. Much of the senior housing currently available in the city is priced at the upper end and may be out of the reach of some current or future residents.

The following cities have regulations that address housing choices and development patterns that may be helpful to University City: Santa Cruz, CA; Boise, ID; North Las Vegas, NV; and Seattle, WA.

C) Green Infrastructure

Infrastructure and flood protection choices are not all determined entirely by University City. Infrastructure review and approval is handled by the Metropolitan St. Louis Sewer District (MSD). There is regional pressure to allow existing structures to remain in the floodplain and some concern that economic development opportunities will be lost if existing structures in the floodplain are removed. Additionally, University City is located near the bottom of the drainage area and is impacted by the development decisions of a number of surrounding communities. Some changes that University City could consider include:

- Establish standards for and provide incentives to reduce the amount of impervious surface used by development/redevelopment, especially in parking lots. There are some concerns about long-term pervious surface maintenance that the city will need to address through new regulations and potentially through the required creation of an improvement district to

care for those surfaces over time. At the residential level, driveway design can be reconsidered to permit ribbon drives or gravel driveways in some locations.

- Educating the development community about the use of low impact development (LID) design. This can be done in conjunction with MSD's existing landscaping guide for stormwater management best practices. University City may want to consider how the use of LID design is considered in the development review process and work with MSD to ensure that LID design is preferred wherever possible.
- More than one participant mentioned that many local downspouts drain to the combined sewer system. University City can explore how other cities in the region have encouraged or required home owners to change this approach to drain across their yards.
- While the city currently has protection standards in place for public trees, similar standards can be established for trees on private property. Specimen trees of a certain caliper can be required to be replaced with new trees of a smaller size that equal the number of caliper inches removed.

The U.S. EPA publication *Water Quality Scorecard: Incorporating Green Infrastructure Practices at the Municipal, Neighborhood, and Site Scale*, includes guidance to help the city review and update current approaches to water quality regulation. Additionally, the EPA maintains a comprehensive list of low impact development resources at water.epa.gov/polewaste/green/index.cfm. Regulations in the following cities address green infrastructure and may be useful to University City: Chicago, IL; Redmond, WA; Portland, OR; San Diego, CA; and Madison, WI.

D) Mixed-Use Development and Infill

The city currently has a planned mixed-use development district available for the creation of mixed-use projects. This is an excellent start toward encouraging mixed-use development. The city may also want to consider:

- Allowing some limited neighborhood commercial in residential zone districts (especially multifamily) as of right, which is a traditional development pattern in some older neighborhoods. This will have to be done carefully with some simple design and operational development standards to protect surrounding homes.
- Creating two or three specific mixed-use districts that identify dimensional and design standards for mixed-use development. This will allow the city to target districts to specific geographic areas of the city and will relieve developers from negotiating many aspects of a new mixed-use development. These new districts should allow development that is taller, more dense, and more physically connected and compact than current development patterns to create areas for residents to live, work, and play all within University City.

EPA Technical Assistance for Sustainable Communities: Building Blocks

- Review the uses permitted in existing commercial corridors to incorporate second-story and above residential uses. Residential could also be permitted in the back side of the first floor. Some areas of University City were originally developed in this pattern and it may be possible to encourage the re-use of these residential locations over time.

A variety of different approaches to mixed-use development can be found in the zoning regulations of the following communities: Austin, TX; Duluth, MN; Denver, CO; Dallas, TX; and Ferguson, MO. A more comprehensive look at this issue can be found in the U.S. EPA's publication *Essential Smart Growth Fixes for Urban and Suburban Communities* (http://www.epa.gov/dced/pdf/2009_essential_fixes.pdf).

E) Green Buildings and Community Lunch Session Discussion

Residents of University City recognize that sustainability results from a combination of site design and building design and there was much discussion about the incorporation of green building requirements. Some of these changes can be made as part of the zoning code, including requirements for vegetated or reflective roofs. Other important changes are being brought forward by the local business community through the consideration of LEED-certified structures and similar efforts, transit-supportive change such as the revitalization of the Loop Trolley that may encourage more compact development patterns long-term, and the emergence of local environmental businesses that provide both structural energy audits and green employment opportunities. Most future structure-related changes, though, will need to be made through the adopted building code. The city is currently considering the adoption of a new building code and may want to further explore the use of a "stretch" code as an add-on to the current building code until decisions are made about future code adoption. Beyond the building code, lunch session participants also discussed the adoption of an energy conservation code for the city and expressed an interest in identifying a method to calculate the embodied energy (all of the energy that goes into the production of a product) of building construction.

To accomplish many of these changes, participants recognized that there needs to be more effort than just changing the code, both the city and residents will need to consider how they might change their behavior. Participants recommended incorporating sustainability into a broader platform than the development codes – the city budget. Suggestions included a line item in the budget for sustainability as well as identifying sustainable changes in financial cost and savings terms so that community residents can have an apples-to-apples comparison of how sustainable changes create benefits for both the city and its residents.

While the city has already made substantial inroads into making decisions about a green building code, additional information from the U.S. EPA *Sustainable Design and Green Building Toolkit for Local Governments* (<http://www.epa.gov/region4/recycle/green-building-toolkit.pdf>) may be useful.

F) Parking

The city's current parking standards were recognized by many in the working group as having parking ratios that are much higher than currently needed. Many ideas for parking changes were discussed, including:

- Reducing or eliminating required parking in much of the Loop area. A recommendation of the Draft Parkview Gardens Neighborhood Sustainability Plan includes the construction of structured parking in this area to meet the needs of local businesses.
- In conjunction with reducing parking ratios, the city may want establish maximum parking standards. Where these standards are exceeded, the property owner is required to provide some type of mitigation to the paved areas of the parking lot, typically through additional landscaping.
- Shared parking (not the current joint parking) and automatic parking reductions can be built into the parking code to reduce the overall number of parking spaces provided by new or redevelopment, especially in mixed-use or transit-available areas.
- Bicycle parking standards should be established and may be used to off-set vehicle parking spaces. Washington University recognizes that a significant number of students are bicyclists and the city can explore ways of providing bicycle instead of automobile parking in neighborhoods where students are the primary residents.
- The parking lot and general landscaping requirements should be customized for downtown and infill development areas. For example, interior landscaping requirements for smaller lots under 15 spaces (which tend to expand the size of parking lots and push developments apart) might be reduced in exchange for more attractive perimeter landscaping, including ornamental metal fencing. Moreover, bonus landscape credit should be given for preservation of mature trees.

The city may want to review the U.S. EPA publication *Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions* (<http://epa.gov/smartgrowth/pdf/EPAParkingSpaces06.pdf>) and parking regulations in the following communities for guidance on changing local regulations: Minneapolis, MN; Austin, TX; Boulder, CO; and Madison, WI.

4) Actions to Address Policies/Strategies

Once the Parkview Gardens Neighborhood Sustainability Plan and the Green Practice Commission's Sustainability Strategic plans have been adopted, the city could identify some preliminary zoning code changes that meet goals in both of these plans. These could include:

- Reducing parking standards and establishing maximum parking requirements;
- Reviewing MSD's LID materials and choosing some urban approaches to encourage city-wide, including rain gardens, green roofs, and improved parking lot drainage mitigation on-site; and

- While the market is still relatively slow, drafting a range of mixed-use districts that work in both the more-urban and more-suburban areas of the city so that future applications can benefit from a shortened approval process and reduced negotiation.

5) Timeframe for Accomplishing Actions

. The city's first step in making regulatory changes is to determine whether to process the code revisions individually or simultaneously. These two approaches serve different priorities. Because many of the code changes identified in the workshop will require discrete changes to the current zoning regulations, rather than a rewrite of the entire code, they could be drafted and reviewed simultaneously depending upon the availability of staff. This allows a concentrated focus on the current code with minimal redundant research for editing purposes. However, the city anticipates that some type of educational process might be helpful with long-term implementation, and in that case it may be beneficial to take the code edits forward individually and spend the necessary time helping the community understand the importance of each change. Individual edits could be organized to move into public discussion and adoption as fast as the city deems appropriate. This might range from one proposed revision per month in a rolling process where review may overlap depending on the length of the public conversation, to one proposed edit every two or three months following the adoption of each previous section. As a grouped set of edits, the city could probably have parking, alternative energy, and housing revisions drafted in a six month time frame for review and discussion by the planning commission. Green infrastructure standards could also be drafted during that time but may require coordination with MSD and may need to be considered as a separate amendment in order to not slow down other amendments. The mixed-use districts will probably be perceived as the biggest change in the community and will most likely require the most public review and comment. It may take up to 12 months to prepare, review, and adopted a series of mixed-use districts. We understand that building code adoption discussions are already underway and do not need to be included in this process. A decision about how to approach the sustainable code revisions should be able to be made fairly quickly, in the next four weeks or so, and then the city can establishing the timing for the rest of the code updates accordingly.

St. Louis County is in the process of drafting updated sustainability regulations that will be made available to its constituent jurisdictions later this year. University City could use those regulations as a comparison point for their drafting process.

6) Implementation Coordination

It will be important to continue the involvement of relevant city departments who participated in the workshop in drafting any sustainable zoning code amendments. The city should continue to reach out to local partners including St. Louis County, Washington University, Great Rivers Greenway, and the East-West Gateway Council of Governments. Additionally, the city's Green Practices Commission should continue its work to push toward University City's goal of being the most sustainable city in the region.

EPA Technical Assistance for Sustainable Communities: Building Blocks

One approach the city could use to more effectively coordinate input from these groups is the creation of a Technical Advisory Committee (TAC) for the code revisions. The TAC would meet to work with city staff to review preliminary drafts of the updated regulations and comment on how they will work in practice and how they may be received by the community. Additionally, TAC members may be able to provide the city with access to resources from their areas of expertise, such as trails and open space or low impact development standards. Based on TAC feedback, the city would edit the sustainable code revisions before submitting them to the planning commission for public review. The TAC would remain in place for the duration of the code revision process.