University urban design centers in the planning and implementation of urban greenways. – Possible strategies for the UMass Amherst Design Center in Springfield, MA.

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Abstract

University supported community design centers in the United States provide an institutional alternative for urban design and planning. They are a link between the innovative and educational milieu of the university and professional practice. Design centers provide the infrastructure that allows faculty and students' research opportunities and projects that intersect with the practice of urban design and planning, with the goal of improving the physical and consequently, the social environment.

This paper assesses the following goals that nascent community design centers should pursue in the planning and design of greenways:
1. focus on developing a collective vision and a tangible plan through public participation, service learning and visualization, 2. execute interdisciplinary and inter-institutional collaboration, 3. establish public-private partnerships, 4. search funds for staffing and implementation with a high proportion from private capital or foundations, 5. pursue a step - by step approach with visible results.

Introduction

In fall 2010 the University of Massachusetts Amherst will open the UMass Amherst Design Center in Springfield, MA as a collaborative effort between the City of Springfield, UMass Extension, the Department of Landscape Architecture and Regional Planning (LARP), the Art and Architecture Program and the Department of Natural Resources and Conservation. The Design Center is a significant contribution in the University's commitment to revitalizing the City and is part of the University's larger "Springfield Initiative", a plan to help revitalize the city [1]. While the goals and mission of the Design Center are still being formulated, the structure of the Center will most likely share attributes of other design centers found in the United States. They provide an infrastructure to allow faculty and students to conduct research and projects that intersect with the practice of urban design and planning with the goal of improving the physical and consequently the social environment (Forsyth, 2006). Urban anthropologist Hyland studied the relationship between social and economic environment and documented the interrelationship of economic development outcomes and community-building outcomes. Trust, a result of process, led to the contribution of more resources, a physical outcome, which led

to a higher level of participation and connectedness, a process outcome (Hyland, 2000, p. 215).

The Design Center in Springfield will build on existing partnerships and new initiatives from UMass Amherst. The LARP has worked on many projects in Springfield ranging from neighborhood revitalization, to commercial/retail district improvements to park and greenway designs (Forsyth et al., 2000; Sleegers, 2008, 2009). The focus on the creation of an interconnected, citywide network of greenways for the nascent Center is proposed and discussed in this paper. It begins with an inventory of existing and planned greenways in Springfield, including their perception among users and planners, and is followed by an explanation of the general benefits and concepts of greenways. Finally the paper highlights general services, organizational structure and benefits of design centers in relationship to greenway planning that are supported by three case studies of design centers that are involved in greenway planning and implementation.

Background

Existing and planned Greenways in Springfield, MA

A review of official planning documents, official and informal surveys and public blogs helps provide an overview and introduction to the current greenway plans and proposals in Springfield, MA. The Pioneer Valley Planning Commission (PVPC), the area's Regional Planning Agency, has developed a comprehensive plan for the complete 21 mile pedestrian and bicycle path along the Connecticut River. The plan, developed in 1992, guided the construction of the 3.7 mile Springfield portion of the path completed in 2003. The total implementation cost for the Springfield segment was $3.4 million (Figure 1.) (PVPC, 2005, p. 3; EOT, 2008, p. 91).

Figure 1. Connecticut River Walk and Bikeway, left (courtesy of Gordon, Goonan, 2008); continuous signage of the trail, right (Dusty, 2007).

The PVPC plan serves population centers in Amherst and the dense cities and towns constituting the Greater Springfield area. The current Connecticut River Walk and Bikeway provides numerous scenic areas overlooking the River. With four access points it unfortunately dead ends in the South close to the South End Bridge in Springfield. The need to connect the existing bicycle path to a broader regional system of multi-use trails is emphasized in the Urban Land Institute (ULI) Downtown Report from July 2007, and underscores the importance of an interconnected greenway system in Springfield (ULI, 2007, p.31).

The greenways in Springfield are part of a 740-mile, seven corridor Bay State Greenway (BSG) network described in the **Massachusetts Bicycle Transportation Plan** developed by the Massachusetts Executive Office of Transportation (EOT, 2008), now part of MassHighway (Figure 2.). Most bicycle projects in the state include the involvement of MassHighway through funding, design, and/or construction (EOT 2008, app. 18). This plan is consistent with the state's larger vision as articulated in the Sustainable Development Principles (Patrick, 2007). The current administration envisions that by 2030 Massachusetts will be a state leader in sustainable transportation and development, in part through the prioritization of environmentally friendly transportation like bicycling and walking. The proposed **Highland Division Rail Trail** is part of the Massachusetts Bicycle Transportation Plan and proposes to connect the McKnight neighborhood in the center of Springfield to Longmeadow in Connecticut (EOT, 2008, pp.31-32). In 2009 the McKnight Neighborhood Council hired a consultant and project coordinator for the rail-trail project to build support for the trail (McKnight, 2010).

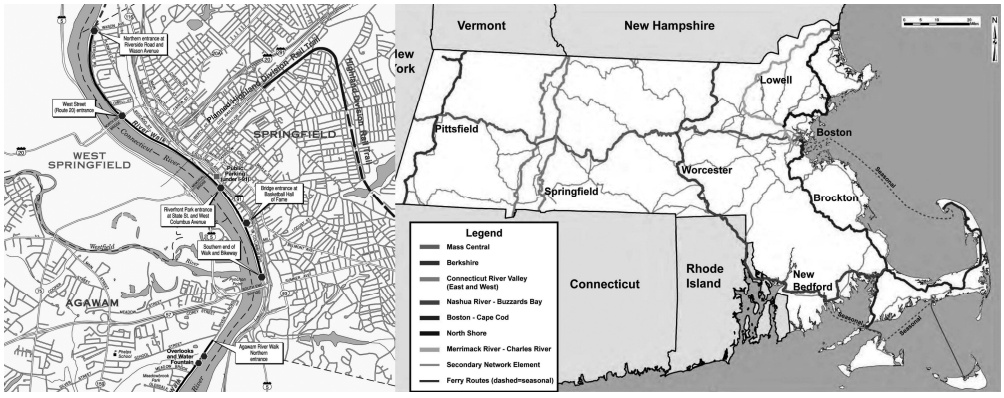

Figure 2. Existing Segment of the Connecticut River Walk and Bikeway, planned Highland Division Rail Trial, left (PVPC, 2008); proposed Mass Bicycle Transportation Plan for a proposed Baystate Bicycle Network (right) (EOT, 2008).

To investigate the priority of greenway planning in Springfield and potential involvement of the new Design Center, a questionnaire by the authors of the paper was sent to stakeholders with roles in greenway planning, including planning officials, health industry representatives and trail advocates. The planning officials surveyed reported that the priority to expand greenways is growing in Springfield and that the services of the future Design Center might help in supporting the

planning process, specifically funding and the education of the general public about the benefits of improving the city's greenways [2]. Within seven years the walk has generated a strong support from users and advocacy groups. One such group is organized as "River Walk" activists. It organizes regular walking tours, maintains a blog on the Springfield segment of the walk, initiated "Walk Weeks" to promote the trail and also to articulate problems with the trail, e.g., the issue of maintenance and responsibility. Despite a high level of community enthusiasm for the trail, plans to link it to a larger greenway network have slowed, in part because responsibility for the trail and for greenway planning is fragmented across several different city departments and commercial entities (Springfield, 2009).

Relatively low implementation cost, existence of a comprehensive plan and programs for Springfield together with supportive and engaged non-profit organizations and planning officials all favor a future focus on greenway planning. In the survey conducted by the authors planning officials explicitly expressed a desire to have the Design Center involved in greenway planning. This would include an effort to provide public education and awareness to the general public about the benefits of greenways and an effort to secure funding. The Design Center could also help build stronger support and advocacy for a greenway network among activists since it will engage them in public participatory processes.

Definition and History of Greenways in North America and their Benefits

The President's Commission on the American Outdoors (1987) recommended the creation of a "living network of greenways". Fabos summarized the efforts of the American greenway movement and categorized them into three types that are overlapping in a comprehensive greenways systems or network: 1. Greenways as ecologically significant corridors and natural systems; 2. recreational greenways in rural and urban areas; 3. greenways with historical and cultural values like bike paths in urban areas (1995, pp. 4-5). Ahern (1995, p. 134) adds aesthetic values and stresses that greenway purposes must be compatible with the concept of sustainable land use. Greenways provide environmental, economic, and health benefits. Noteworthy are recently studied economic benefits: greenways increase the value of nearby properties, improve their marketability, and increase tax revenues (Markeson, 2007; Karadeniz 2008; Lindsey 2003) [4].

The multiple benefits of greenways are significant as they strengthen the argument for a Design Center to prioritize facilitating the further planning and implementation process for an interconnected, citywide network of greenways.

Services of Design Centers

Eight types of basic services provided by university Community Design Centers were identified through a literature review on participatory processes in urban design, online research, a questionnaire that was sent out to stakeholders for

greenway planning in Springfield [2], and the services provided by UMass Urban Design Studios from 2008 to 2010:

1. Education of students within university design studio settings (Forsyth et al. 2000, Sleegers 2008, 2009).
2. Education, information and activation of the public with visual material about successful planning and design solutions elsewhere or visualizations of site specific solutions [2].
3. Facilitation of participatory processes such as organization of community charrettes (Condon, 2008; [2]) or envisioning workshops (Sleegers, 2009).
4. Generating general and site specific new knowledge through faculty research with possible research funding opportunities, e.g., legal research, program research (Forsyth, 2006; Lindsey et al. 2006).
5. Development of strategies for funding opportunities for projects such [2].
6. Bringing in new stakeholders for projects [2].
7. Coordination of efforts by non-profits, elected officials and city planning staff [2].
8. Increasing the visibility of community support through digital media [2].

These eight services determined the selection of three case studies of Design Centers in greenway planning and implementation in the later paragraph.

Organizational Structure of university Community Design Centers

Forsyth (2006) classified seven types of university-based centers as environments for doing urban design with the notion that the centers often perform multiple functions.

1. **Research centers** focus on innovative research with the strength of a strong connection to the university and research – oriented faculty. A disadvantage is that they sometimes seem to be cut off from the real world.

2. **University–based firms** provide paid practice work doing planning and design projects that parallels private sector consulting firms. They are attractive because of their potentially neutral position, but they may not be innovative.

3. **Community advocacy centers** work in a participatory manner and focus on social equity and environmental justice mostly an emphasis on free or inexpensive practice. They are often criticized for merely ameliorating problems and wasting the time of community participants.

4. **Extension oriented centers** employs professional agents to transfer new research from the university into practice and professional help. A disadvantage is that as a staffed-based model the educational and research mission of the university is not fulfilled to its highest potential.

5. **Studios**, are largely smaller centers typically lead by one director. They often have the advantage of having a clear focus, but their performance is often dependent on the integrative qualities of the key figure.

6. **Clearinghouses** focus on providing public and professional education. Universities are in an excellent position to provide these services. Many communities, however, may want more than just information.

7. **Umbrella/convening organizations** are centers that support a number of independent research and outreach initiatives as well as individual faculty. The center is an infrastructure and has potential for diverse and high-quality activities. They are sometimes accused of lacking focus but on the other hand are not constrained by an overly narrow mission statement.

Forsyth's classification is valid to understand the work of university Design Centers and will be discussed within the context of the new Design Center.

Case Studies

The following case studies were chosen because they 1. share services in common with those set for the UMass Amherst Design Center in Springfield; 2. are involved in greenway planning; and /or 3. serve populations similar to Springfield.

The Arkansas Community Design Center was responsible for the design of a large scale trail system for Warren, Arkansas. The Cleveland Urban Design Collaborative serves a struggling urban community with demographics similar to Springfield and is responsible for a greenway that is currently under construction. In Chattanooga, Tennessee a large scale waterfront redevelopment, including trails and pedestrian spaces, represents a city of similar size to Springfield with a successful greenway that has been built with the aid of Chatanooga Urban Design Studio.

University of Arkansas Community Design Center (UACDC)

The University of Arkansas Community Design Center (UACDC) is a model for a center that provides multiple of design and planning services as an outreach center of the School of Architecture. Financial support comes from the department of Architecture and a private foundation that funds a full-time faculty member of the department devoted to both teaching and directing the activities of the center. This center also employs three project directors with professional design experience. The UACDC has been successful in competing for awards from national and statewide architectural and planning associations and has been published in prominent exhibitions and professional magazines. The center has a strong focus on visionary work in the planning and design disciplines, work that is powerfully communicated through the project visualizations included on the center's website (UACDC, 2010). Unfortunately, the center's design for a one-mile central greenway for Warren, Arkansas, has not been realized.

Kent State University – Cleveland Urban Design Collaborative

The Cleveland Urban Design Collaborative (CUDC) is a community service organization with a professional staff of architects, planners, urban designers, and landscape designers. It provides design services to clients who might not otherwise

be able to afford them and works with students in the graduate program in urban design studios and design charrettes as part of the CUDC's "service learning" commitment. The CUDC employs students as research assistants and serves educational functions through lectures, publications on best practices and direct advocacy. The center focuses on applied research rather than formal peer reviewed research on urban issues. Funding is provided by the College of Architecture and Environmental Design (CAED, 2010) at Kent State University, by the Ohio State Board of Regents and by private philanthropy (CUDC, 2010).

The Train Avenue Greenway Plan is a successful example of the center's initiating planning for a neighborhood connector trail. This multi-purpose trail cuts through Cleveland, Ohio's industrial and transportation history along a 2.5 mile long corridor along the filled creek bed of Walworth Run. The study was funded by a NOACA Transportation for Livable Cities Initiative grant and is under construction. The plan represents a collaborative effort of the City of Cleveland and five partnering non-profit groups (DiPasquale, 2010; SRO, 2008).

While not all of the center's projects reach the construction phase like the connector trail, they do catalyze dialogue within the community

Chatanooga Urban Design Studio

The Design Studio was founded in 1984 by the City of Chattanooga, the Lyndhurst Foundation, and the University of Tennessee at Knoxville, which jointly funded a director position for the studio. The Studio served as a catalyst to the subsequent development of the Tennessee Riverpark Master Plan in 1985. The plan, with twenty miles of greenways within the city and fifty-five miles of regional greenways, was financed by $33 million in private capital. Today, the Design Studio continues to be funded by the founding organizations plus a not-for-profit development and a two-county regional planning agency. The mission of the Studio is to help the community develop a collective vision, to do solid planning, and to assist in the implementation of projects. It catalyzed public participation as a design culture; public participation is now an expected part of the planning process. Karen Hundt, the recent director of the Studio, emphasizes the importance of communicating how things look through visualization tools rather than focusing only on zoning and regulations as the classical planning tools. She also expresses the importance of interdisciplinary work that does not separate architects, planners, and engineers (Rahaim et al. 2002; Chattanoogan, 2005; Markeson 2007).

Both the University of Arkansas Community Design Center and the Cleveland Urban Design Collaborative follow the model of a university-based firm. The CUDC, though, seems to have a greater influence on the implementation or further planning of physical projects which is the case for the Train Avenue Greenway Plan. It also seems to provide greater infrastructure for public and university education and for advocacy functions. It is assumed that implementation, public education, and service learning experience have a positive correlation. All of the centers studied

focus on applied research. All three desing centers use public and private funds to operate and to support a small professional staff and use strong visualizations of design proposals to educate the public. The Chattanooga Urban Design Studio is smaller in size and less focussed on marketing than the other two design centers. More significantly it differs in its clear focus on project implementation. Interdisciplinary, inter-institutional collaboration, securing sufficient funding, and developing a collective vision seem to work hand in hand.

Discussion and Conclusion

This paper assesses arguments why the UMass Amherst Design Center in Springfield should focus on the implementation of greenways in the City. Relatively low implementation costs, the multiple benefits of greenways, existence of already completed comprehensive plans and programs for Springfield together with supportive and engaged non-profit organizations and planning officials. Springfield planning officials have also expressed a desire to have the Design Center involved in greenway planning through public education and outreach and the identification of potential sources of greenway funding.

The appropriate organizational structure for the future UMass Amherst Design Center in Springfield should help meet the Center's mission and planned services. A **research center** would take advantage of UMass's strong research oriented faculty but would not lead to changes in the physical environment of Springfield or catalyze community participation. A **university–based firm** would offer the advantage of organizing recent Springfield-based design and planning work at the university in a more systematic and professional way than the current design studios. A university-based firm would also make an impact on the physical environment of the city. The **community advocacy center model** is applicable to the problems of Springfield but it has the disadvantage of only ameliorating. The e**xtension oriented center** would seem to be compatible with the university's strong extension program, which is already involved with the Design Center. UMass Extension programs already exist in Springfield and part of UMass Extension's mission is to address economic development and revitalization of the state's communities. The **studio** would also be an attractive model because it could focus on clearly defined core topics and effective short-term efforts with the potential to integrate into bigger organizational schemes. The **clearinghouse** model with focus on education and information is valid but a combination with other functions towards physical implementation is recommended. The model of an **umbrella/convening organization** appears to be a model for a Design Center in a more advanced stage than the UMass Amherst Design Center but definitely is a potential solution for a center that is home to many disciplines and interests like UMass.

The findings of this paper suggest the following guiding principles for the nascent UMass Amherst Design Center in Springfield:

1. Focus on developing a collective vision and a tangible plan through public participation, service learning and visualization.
2. Execute interdisciplinary and inter-institutional collaboration.
3. Establish public-private partnerships
4. Identify potential funding sources for staffing and for project implementation, with a high proportion of funds coming from private capital or foundations.
5. Pursue a step - by step approach with visible results, including strong leadership.
6. Integrate the research culture of UMass as a longer - term commitment. Progress in the planning and implementation of greenways results in a tangible and meaningful product that would gain momentum for other Design Center projects; it would energize fruitful relationships between planning officials, non-profit groups and the private sector. This in turn will help establish a mission and future goals for the Design and a basis for a positive evaluation of neighborhood change through trust, resulting in an improved physical and social environment.

Endnotes:

[1]The plan includes among its main goals 1) Creating "spin-off" companies based on UMass research, and locating these companies in Springfield, 2) Continuing to develop the ongoing "Pioneer Valley Life Sciences Initiative", 3) fostering a "pipeline" between Springfield and UMass Amherst to attract more Springfield residents to UMass and 4) Establishing a physical presence in Springfield for UMass.

[2] Potential services of the future UMASS Amherst Design Center were listed by planning officials, health industry representatives and trail advocates through a survey from April 2010 conducted by the authors of this paper.
[3] Potential collaborative partnerships for greenway planning in Springfield were listed by planning officials, health industry representatives and trail advocates through a survey from April 2010 conducted by the authors of this paper. Potential partnerships include also potential private partners to provide necessary funds, residents or stakeholders from other urban communities and groups supporting active recreation.

[4] Studies on the Little Miami Scenic Trail, FL and Monon Trail, IND show that interconnected greenways, on average are correlated with statistically positive effects on housing and property prices. Housing prices close to the Monon Trail had an up to 11% increase in value in comparison to houses that were not connected to the trail (Karadeniz 2008, Lindsey 2003).

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