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Design and implementation of health-promoting community interventions can advance public health and community well-being; however, realization of such programs is often challenging. Even more challenging is the implementation of ecologic interventions to revitalize built urban environments. A structured intervention entitled "Intersection Repair" was devised in Portland, Oregon, by a non-profit organization, to implement urban gathering places in the public right of way; specific steps included situation analysis, community outreach, asset mapping, design workshops, construction permitting, building workshops, and process evaluation. The community created human-scale urban landscapes with interactive art installations to encourage social interactions. Such aesthetic improvements, which included painted street murals, information kiosks, hanging gardens, water fountains, benches, and so on, were intended to strengthen social networks and social capital by providing places for residents to engage in conversation. Community engagement in neighborhood design benefits the public at multiple levels, by promoting a healthier lifestyle, over and above urban landscape improvements.

Keywords: *neighborhood intervention; built environment; social capital; social networks, community empowerment and participation*

The urban core of most American cities was laid out in a grid pattern comprising streets and side streets intersecting at right angles that created rectangular or square city blocks (see Figure 1). The rationale behind such city planning was to increase the connectivity between any two given points, thereby diversifying the transportation options and enhancing the transportation system. The uniform distance between city blocks and sections facilitates efficient transport of people and commodities. Thus, the grid is a preferable

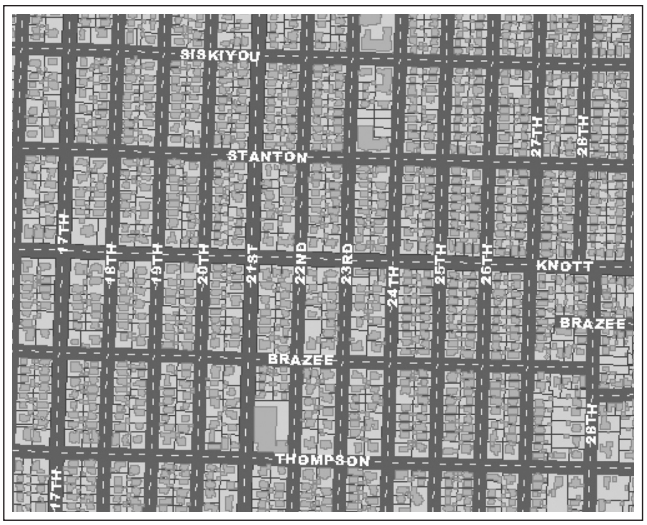

FIGURE 1 The Grid City With a Predetermined Rectilinear Layout
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form of urban planning to create cities with high connectivity for the efficient movement of goods and services.

However, the monotony of the strict grid design without public squares, ceremonial places, public structures, and parks deprives the urban population of recreational sites. Cities laid out on the grid pattern often lack social gathering places, which can result in social disconnectedness and incoherence in urban areas (Semenza, 2003). Community-initiated interventional efforts to retrofit the layout of the grid city by integrating public gathering places into the public sphere have enormous potential to actuate a sense of community, set off interactions among strangers, generate community art projects, and cultivate civic capacity.

BACKGROUND/LITERATURE REVIEW

Community organizing in urban neighborhoods can reverse isolation and foster a sense of cohesiveness that counteracts urban blight; it encourages residents to take initiative against social disorder and physical deterioration (Ross & Jang, 2000). Neighborhood stewardship is a direct consequence of community organizing capacity that can be translated into concrete action such as physical improvements of the urban environment to solve local problems (Wakefield & Poland, 2005). Often residents have control neither over the demographic composition of their neighborhood nor over transient populations that may be involved in drug trafficking and crime; however, residents can invigorate their built urban environment. Factors that influence such community organizing efforts to reverse urban decay are sense of social connectedness and sense of community among neighborhood residents (Chavis & Wandersman, 1990; McMillan, 1996). Public gathering places that are pedestrian oriented, aesthetically pleasing, friendly, and safe, such as the public squares described below, can facilitate social interactions that in turn increase the sense of community and participation in community efforts (Leyden, 2003).

Social network ties are associated with community well-being and physical and mental health (Hawe & Shiell, 2000; Kawachi, 1999) whereas low levels of social networks and companionship ties are associated with increased mortality (Berkman, 1995; Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997; Semenza et al., 1996). Neighborhood residence and environmental features that facilitate social networks such as public gathering places and worthwhile destinations for pedestrians have been shown to improve mental health (Dalgard & Tambs, 1997; Leventhal & Brooks-Gunn, 2003). Neighborhoods that are more conducive to walking and social interactions encourage physical activity and may help control the obesity epidemic (Ewing, Schmid, Killingsworth, Zlot, & Raudenbush, 2003; Giles-Corti, Macintyre, Clarkson, Pikora, & Donovan, 2003).

Social networks and interactions that promote trust and reciprocity among citizens have been defined as *social capital* (Putnam, 2000). It refers to the potential and resources inherent in social structure or social networks (Coleman, 1990; Sampson, Morenoff, & Earls, 1999), which constitute the web of social relationships and their characteristics in a community (Berkman & Glass, 2000). Social capital relies on such networks for collaboration between residents of decaying urban environments to initiate collective problem solving (Ziersch, Baum, Macdougall, & Putland, 2005). Social capital can be seen as a consequence of social relationships that promote trust, reciprocity, community participation, and mutual cooperation and is therefore not a characteristic of one particular individual but rather a communal characteristic (see Figure 2). As such, social capital can facilitate counteractive action in an urban setting and advance specific steps necessary for local problem solving.

Social capital has two components: localized (bonding) and bridging social capital (Putnam, 2000). Localized social capital, inherent in existing social or religious groups, is essential but not sufficient for neighborhood problem solving because it may produce superfluous information not relevant to improving inner-city neighborhoods (Granovetter, 1973; Green & Kreuter, 2005). Although certain communities have strong social ties, these contacts may not reach beyond the limits of the social groups and, thus, do not infuse the groups with new ideas and expertise. In contrast, bridging social capital interconnects various groups and can divulge new information for local problem solving and generate new opportunities (Altschuler, Somkin, & Adler, 2004). Therefore, a public health intervention that systematically builds social networks to boost localized social capital and promotes bridging social capital should result in collective efficacy that would engage residents in direct public action (Sampson et al., 1999). Such an intervention can help realize community projects that build civic capacity and develop stewardship skills to

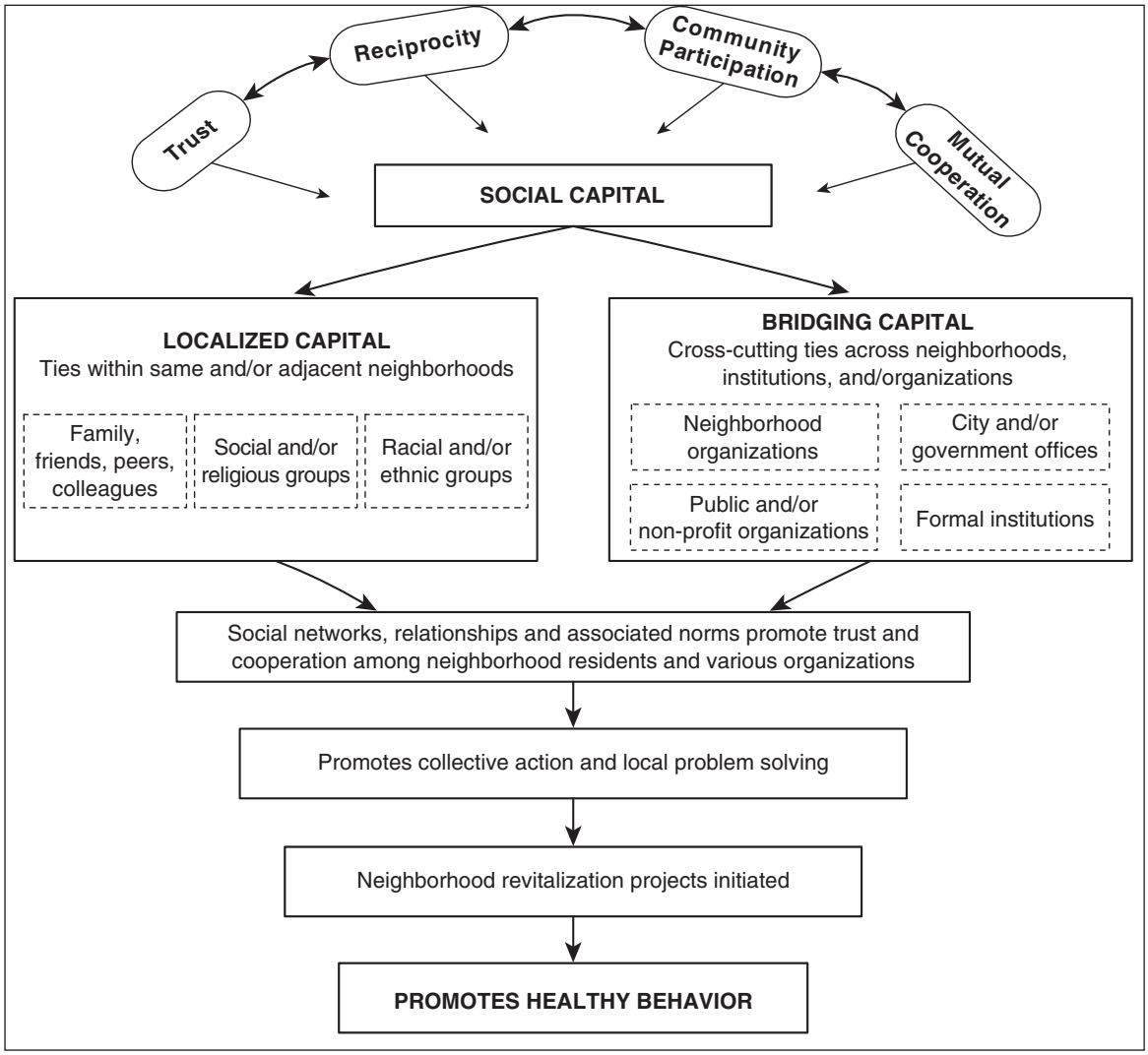

FIGURE 2 Localized and Bridging Social Capital to Advance Community Competence

promote collective decision making and local problem solving (James, Schulz, & Van Olphen, 2001).

It has been acknowledged that voluntary participation in organizations and associations is crucial for local problem solving (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1996), disease prevention (Green, 1990), and mental health (Naparstek, Biegal, & Spiro, 1982); however, it has proven difficult to realize such programs (Veenstra, 2005). A course of action has been standardized that aims to build localized and bridging social capital, through an ecologic intervention titled Intersection Repair developed by The City Repair Project (2005), a nonprofit organization in Portland, Oregon. The intervention aspires to energize residents to improve the urban environment physically (streets and public squares) to encourage physical activity (Leyden, 2003); it seeks to inspire residents to build enthralling destinations for pedestrians in the public realm that are socially inviting to enhance social networks and cohesion; and it intends to engage partakers to redecorate the neighborhood symbolically to create a sense of affinity and pride.

METHODS/STRATEGIES/INTERVENTION APPLICATIONS

Goals and Objectives

The objective of this health-promoting neighborhood intervention was to promote community participation and neighborhood stewardship in the interest of public

health. Through this urban revitalization strategy communities were directly engaged in urban design, a field that has traditionally been dominated by professional planners, architects, and developers (Jackson, 2003). This community-initiated neighborhood revitalization project was intended to dynamically connect neighborhood residents by involving them in the design and implementation of creative and attractive urban places that were inherently restorative to mental and physical health. The strategy was to create sustainable communities through environmentally conscious construction of vibrant and aesthetic gathering places enhancing the livability of the neighborhood and the well-being of residents. It was anticipated that improvements in the physical environment as a result of the intervention would have positive ripple effects across quality-of-life indicators, such as safety, social networks, crime level, and well-being. Working on ecological construction with cob (a sustainable, natural building material of clay, straw, sand, and water) necessitates collective physical labor for cob to be mixed and formed into shape. This interventional effort was likely to stimulate social interactions and increase physical activity among neighborhood residents. Other activities, such as community organizing and design workshops, were also expected to expand and strengthen existing social networks.

Design of the Health-Promoting Neighborhood Intervention: Intersection Repair

Intersection Repair neighborhood interventions were initiated in seven neighborhoods in Portland, Oregon, a city of 550,560 residents (2004 population estimate; Table 1). The population density in these neighborhoods ranged between 10 to 18 persons per acre, and house ownership ranged from 16% to 61%; the average household income was U.S. $34,753, and with the exception of one neighborhood, the majority of residents were White. A situation analysis revealed multifarious social and environmental problems, including transient populations, social disorder, crime, street litter, and parking violations. We present a step-by-step description of the intervention designed to promote health and social well-being among residents in these neighborhoods.

Community Outreach

Community organizers were recruited from staff at The City Repair Project, a local nonprofit organization committed to create livable communities; they were responsible for outreach to neighborhoods with significant urban problems (Figure 3, Step 1). The organizers attended neighborhood meetings, school and church gatherings, and disseminated information through a local radio station (KBOO), door-to-door outreach, flyers, listservs or Web sites, posted information on bulletin boards or in someone's front yard, hosted small gatherings, and so on. Particular attention was placed on involving underrepresented populations such as groups of different socioeconomic status, race, ethnicity, age, sexual orientation, and so on. To begin the process of selecting potential sites for interventions, the organizers reached out to a wide range of residents to assess skills and indigenous resources (primary building blocks) in a process of asset mapping (McKnight & Kretzmann, 1997); professions and skills were charted on residential maps (Figure 3, Step 2). The organizers held informational meetings at a residence or business (e.g., café, or restaurant) close to the site where they anticipated implementing an intervention project (Figure 3, Step 3). At the initial meeting, residents mingled with each other enjoying a pot-luck meal and initiated social networks in a process of building localized social capital. In subsequent meetings, information was provided about mechanisms for revitalizing the built urban environment, and the community organizers held a slide presentation about projects that had been implemented in the past. This step triggered discussions, and an open debate was held to allow different points of views to be expressed. The community organizers tracked these discussions and created contact lists, including names, addresses, phone numbers, and e-mails of engaged residents.

The community organizing staff attempted to ensure that all residents within a 2-block radius of the potential intervention site were involved (or informed) in this process because these individuals were officially required to sign off on the final project (see below). Volunteers were involved in the outreach activities to disseminate information about forthcoming meeting time and location, through flyers, notices in neighborhood newsletters, announcements at community events, and so on. Representatives from neighborhood associations also participated in this process because they were the local advocates for neighborhood issues and represented a voice to the larger city government. Representatives from City bureaus were also informed about the process, and neighborhood residents were encouraged to work with the City to discuss different project ideas in an effort to advance bridging social capital.

Design Process

Subsequent to these meetings, interested neighborhood groups received Request for Proposals (RFP; Figure 3, Step 4) and were asked to provide information about their motivation to initiate such a project, the depth of

TABLE 1
Demographic Composition of Neighborhoods With and Without a Health-Promoting Neighborhood Intervention, Portland, Oregon, 2003

Neighborhood (%)	*Sunnyside (%)*	*Buckman (%)*	*Richmond (%)*	*South Tabor (%)*	*Montavilla (%)*	*Boise (%)*
Population	7,155	7,923	11,320	6,131	15,987	3,119
Area (in acres)	383	739	814	511	1,393	276
Population density persons per acre	18	10	13	11	11	11
Male population	3,320 (46)	4,137 (52)	5,468 (48)	3,011 (49)	7,864 (49)	1,556 (50)
Female population	3,835 (54)	3,786 (48)	5,852 (52)	3,120 (51)	8,123 (51)	1,563 (50)
Households	3,487	4,312	4,972	2,540	6,025	1,168
Homeowners	1,230 (35)	710 (16)	2,990 (60)	1,553 (61)	3,665 (61)	525 (45)
Renters	2,257 (65)	3,602 (84)	1,982 (40)	987 (39)	2,360 (39)	643 (55)
Household size (average)	2.05	1.84	2.28	2.41	2.65	2.67
Race and/or ethnic groups (in %)						
White	86.1	81.1	81.7	75.8	71.7	34.5
Black	1.7	4.1	1.4	2.0	3.1	41.8
Native American or Native Islander	1.2	1.7	.9	1.1	1.5	2.7
Asian	4.4	2.6	7.1	12.7	11.8	2.2
Other	1.2	2.7	2.0	2.2	3.2	7.2
Hispanic	3.4	5.4	4.1	5.5	6.5	13.6
Age distribution (in %)						
Younger than age 5 years	3.7	2.9	4.9	6.1	6.6	8.3
5 to 17 years	7.2	7.2	11.6	14.3	15.4	19.8
18 to 21 years	4.1	4.5	3.6	4.3	7.7	6.1
22 to 39 years	48.8	52.0	10.6	30.1	31.1	35.2
40 to 64 years	24.6	28.4	28.8	30.9	27.7	22.7
65 years and older	11.7	4.9	10.4	14.3	11.5	7.9
Educational attainment						
Percentage high school graduate or higher	90.4	90.8	84.8	84.8	84.6	72.2
Percentage bachelor's degree or higher	45.1	46.5	31.7	31.7	23.1	25.2
Median household income	$37,181	$28,960	$39,984	$39,984	$37,095	$25,318
Successful intervention	yes	yes yes	yes	yes	no	no
Intervention in public right-of-way	yes	yes no	yes	no	no	no
Intervention accessible to public	yes	yes yes	yes	yes	no	no
Strong neighborhood core group	yes	yes yes	yes	yes	no	no
Successful community outreach	yes	yes no	yes	no	no	no
Vocal opposition to intervention	no	no no	no	yes	no	yes

SOURCE: PortlandMaps © 2005, City of Portland, and U.S. Census Bureau; Summary File 3 presents detailed population and housing data (such as place of birth, education, employment status, income, value of housing unit, year structure built) collected from a 1-in-6 sample and weighted to represent the total population.

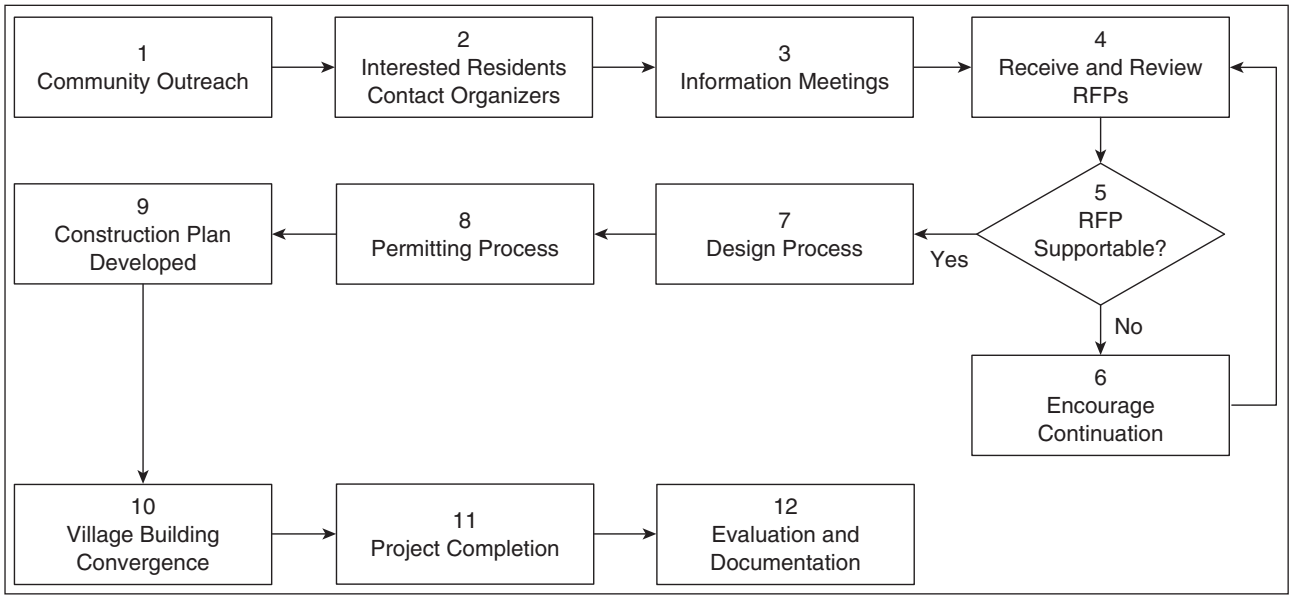

FIGURE 3 Community Capacity Building Through Urban Design
NOTE: See text for details; RFP = Request for Proposals.

neighborhood participation, and their vision. From the pool of applications by these neighborhood core groups, potential sites were selected (Figure 3, Step 5) to be supported by City Repair and for formal implementation of the intervention. Neighborhood groups not selected for implementation were advised to strengthen their outreach efforts and to reapply the following year. The neighborhood core group served as leaders who organized meetings and encouraged participation in the design process from residents within a 2-block radius. Because certain individuals are not inclined to sit through organizational meetings, but nevertheless could bring valuable assets to the process, participation in a variety of activities was solicited from a broad base. This strategy ensured self-reliance and sustainability (Green & Kreuter, 2005). The neighborhood core group also determined the schedule for community involvement, organizational structure, design workshops, installation dates, plans for maintenance and future development of the project, and for regularly communicating with their neighborhood associations and with affected neighbors. Neighborhood residents were provided with information about the project, results of meetings, next steps, and ways to get involved and/or respond. Through collective efforts with trained facilitators and design professionals, a base map of each of these sites was developed with significant landscape features and architectural structures. Suggestions for worthwhile destinations for pedestrians and other improvements were discussed and integrated into preliminary drawings. Designs for the public place were a reflection of the local culture and public art and incorporated features such as seating areas, lighting, signage, paths, landmarks, water fountains, and information centers and/or kiosks. The design workshops involved a series of steps with feedback loops, where ideas and suggestions were transformed into designs, moving from the general to the specific (Figure 3, Step 7). Architects and design professionals evaluated and supported the skills of the neighborhood residents. The neighborhood core group disseminated the design concepts and ideas as part of the outreach activities, and feedback was incorporated into architectural drawings for the purpose of obtaining permits and construction. The group ensured that all voices were heard by having open discussions and anonymous ranking of design plans. To ensure that the decision-making process was accessible, the core group solicited feedback from residents individually by systematically going from door to door. A concerted effort was made to solicit feedback in an effort of collective decision making.

At least two design workshops per neighborhood were held to develop worthwhile destinations for pedestrians and other aesthetic features and structures. The design workshops encouraged public participation, where neighbors shared ideas and concerns to collectively produce the design and process for creating the project. Workshops were planned to be as accessible as possible, including choice of time and location, and providing transportation, child care, food, and so on. A workshop design team assisted in the development of technical drawings. The team was composed of design professionals,

trained facilitators, and providers of technical assistance in the areas of natural building, permaculture design, and relevant forms of public art. The workshop design team was assigned the responsibility of guiding the design process at each project site.

The final plans were presented at an informal community gathering and routed for signature within a 2-block radius of the project, as required by a city ordinance (see below) prior to obtaining permits and approval. At least 80% of residents (approximately 120 households) were required by city ordinance to approve the project as well as all four-corner houses at the intersection.

Permitting Process

The neighborhood core group and volunteers from the City Repair Project presented the proposal to City traffic engineers for assessment and approval, an experience anticipated to augment bridging social capital among residents. This design process resulted in the development of plans for structures that promote walking activity, social relations, and cultural progress, while the actual process of collectively constructing a feature in the public realm was intended to empower communities and strengthened social networks. The City of Portland permitted street painting and construction in the right-of-way, according to a City Ordinance (#172207, September 19, 2001), which regulated the implementation of such activities. The Portland Department of Transportation (PDOT) had established a model for such projects by granting revocable permits (Figure 3, Step 8) for ongoing intersection modifications, if the two streets were classified as Local Service Streets and carried less than a combined 2,500 vehicles on an average day. A petition of support was required by the City; the petition had signatures from each of the adjacent residents and at least 80% of the residents on the project street frontage(s) within two standard city blocks of the proposed project. The City traffic engineer had the authority to modify the petition boundaries when considered appropriate. The residents provided a written description of the proposed changes, including diagrams depicting how the intersection will look after completion. The residents demonstrated how the project would improve or at least maintain traffic safety and the safety of individuals at or in the vicinity of the intersection. Issues of concern were:

- Pedestrian, bicyclist, and automobile safety: Concerns for safety were integrated into all designs, as outlined by PDOT requirements and the technical expertise of the design professionals involved. Concerns were also addressed by reviewing statistics for car-to-person collisions at the intervention sites and inviting representatives of existing sites to speak at neighborhood meetings to discuss pedestrian safety issues.
- Disability accommodation: Wheelchair accessible curbs were installed according to PDOT and American Disabilities Act (ADA) requirements to accommodate disability concerns. Concerns were also addressed by inviting a representative from Independent Living Resources to the neighborhood organization to discuss disability issues and how to develop a space that is safe and inclusive for people with disabilities.
- Maintenance: The neighborhood core group at each site was committed to supervise the long-term responsibility, maintenance, and development of the Intersection Repair project.

Implementation and Construction

A core group was formed comprising volunteers, neighbors, students, professionals, builders, designers, activists, and artists; the committee also included staff and volunteers from The City Repair Project. The core group was responsible for project implementation through a workshop titled the Village Building Convergence (VBC), the organizational structure at the heart of this intervention (Figure 4a); the VBC core group was essentially the organizing committee in charge of coordination of all project aspects and fund-raising. Funds were raised through grant writing to local foundations and city agencies 1 year prior to construction. Neighborhood groups and local businesses were encouraged to contribute to the construction costs of projects in their neighborhood. Materials per site amounted to approximately $1,200; salaries for professional builders were $600; and salaries for community coordinators and/or outreach, and designers amounted to $1,200. Funds were kept to a minimum by using recycled building materials, volunteers, and pro bono services. A construction plan was developed following discussions among members of the committee (Figure 3, Step 9). Implementation of projects provided many opportunities for individuals and organizations to contribute their resources, knowledge, and ideas. The media were used to alert the public to the upcoming event and how to get involved; information was circulated through Web sites, neighborhood newsletters and newspapers, Community Radio, and nonprofit organization networks. The organizing committee helped the neighborhood residents to mobilize and build the community public places that they had envisioned, designed, funded (at least in part), and maintained themselves. These physical places created by the communities were expected to facilitate public gatherings.

The VBC organizational structure (Figure 3, Step 10) was the coordination center for several neighborhood revitalization projects across the city (Figure 4b). The VBC was an annual 10-day event of collaborative action and celebration, which culminated in creating dozens of aesthetic, lively neighborhood gathering places

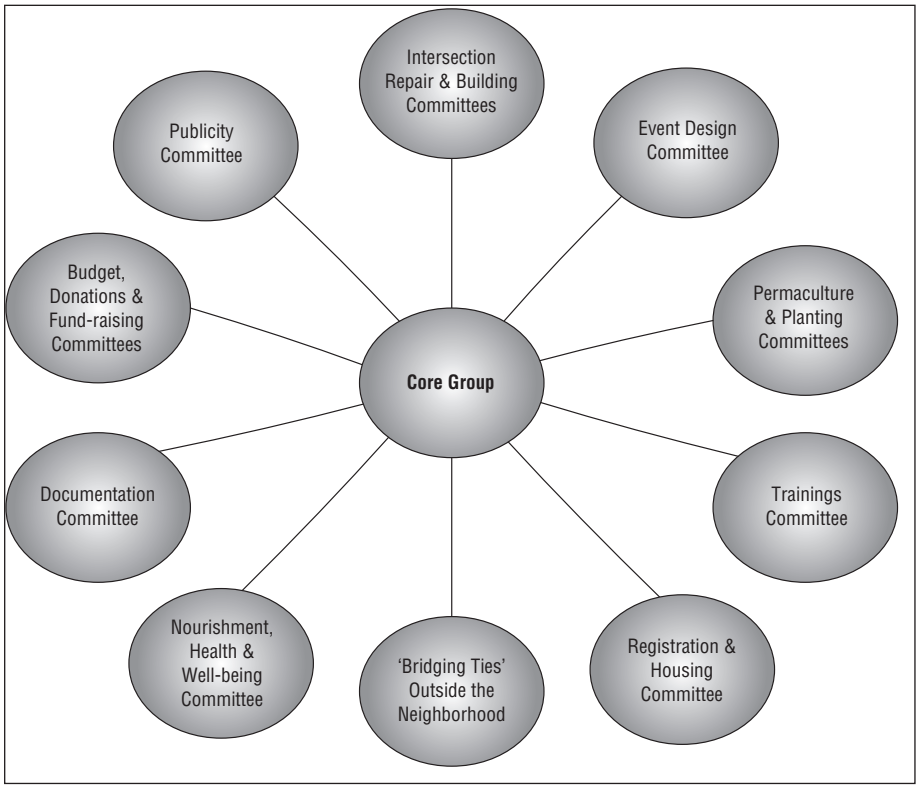

FIGURE 4A Organizational Structure of the Village Building Convergence (VBC) Coordinated by the Core Group

simultaneously across the city. One third of residents within a 2-block radius of the sites participated in project installation at least once, and more than 1,000 people including neighbors, activists, professionals, students, volunteers, community organizers, visitors, and sponsors participated in the workshop to build physical elements in the public realm as a showcase of neighborhood improvement, and sense of community among participants (Figure 3, Step 11). The impact of VBC on the neighborhoods was greater than any individual project because of the tremendous synchronization of multiple projects.

The VBC workshop was a result of a multilayered, organizational structure linking various neighborhood projects; their essential functions were coordinated by committees and are detailed in Table 3. The committees made the majority of their own decisions with respect to their relevant functions but brought significant matters to the VBC core group (Figure 4b). The neighborhood core group communicated with various stakeholders outside the immediate neighborhood such as government offices, organizations, local businesses, schools, and volunteers, while the VBC core group coordinated the workshop activities at various neighborhoods by partnering with the neighborhood core groups and other organizations citywide. This "fractal structure" was designed to enhance collective efficacy through empowering neighborhood residents to take coordinated action at multiple levels (social and bridging social capital). The VBC allowed neighborhood residents to be the decision makers and dispersed power and responsibilities equally among community members. The completed urban features were a manifestation of community capacity and neighborhood stewardship (Table 2).

Lessons Learned

Graffiti and crime had been a problem prior to the intervention and was ameliorated as a result. We examined reported offenses (burglary, assault, vehicle theft, robbery, etc.) at one site for which there was sufficient follow-up data within a 1-block radius, 2 years prior (N = 364) to the community intervention and 2 years following (N = 308), and we found a statistically significant decrease in crime ($p < .001$) compared to two unimproved, adjacent control sites. In the same time frame there was a reduction in calls for service at this site (N = 922 compared to N = 1,029), while there was an increase in service calls at the two control sites.

Process evaluation was implemented at seven sites that had expressed interest in Intersection Repair (Table 1 and Figure 3, Step 12): Three of them successfully completed wide-ranging projects in the public realm (in the Sunnyside, Buckman, and Richmond neighborhoods); two groups completed projects on private property, which was accessible to the public (in the Buckman and South Tabor neighborhoods); while two groups did not succeed implementing their neighborhood projects (in the Boise and Montavilla neighborhoods). At these two sites, the asset mapping had failed to uncover weak primary building blocks: Individual leadership capacity of the core group and assets within the community were insufficiently developed. Community outreach failed to reach a broad base of residents and did not engage important

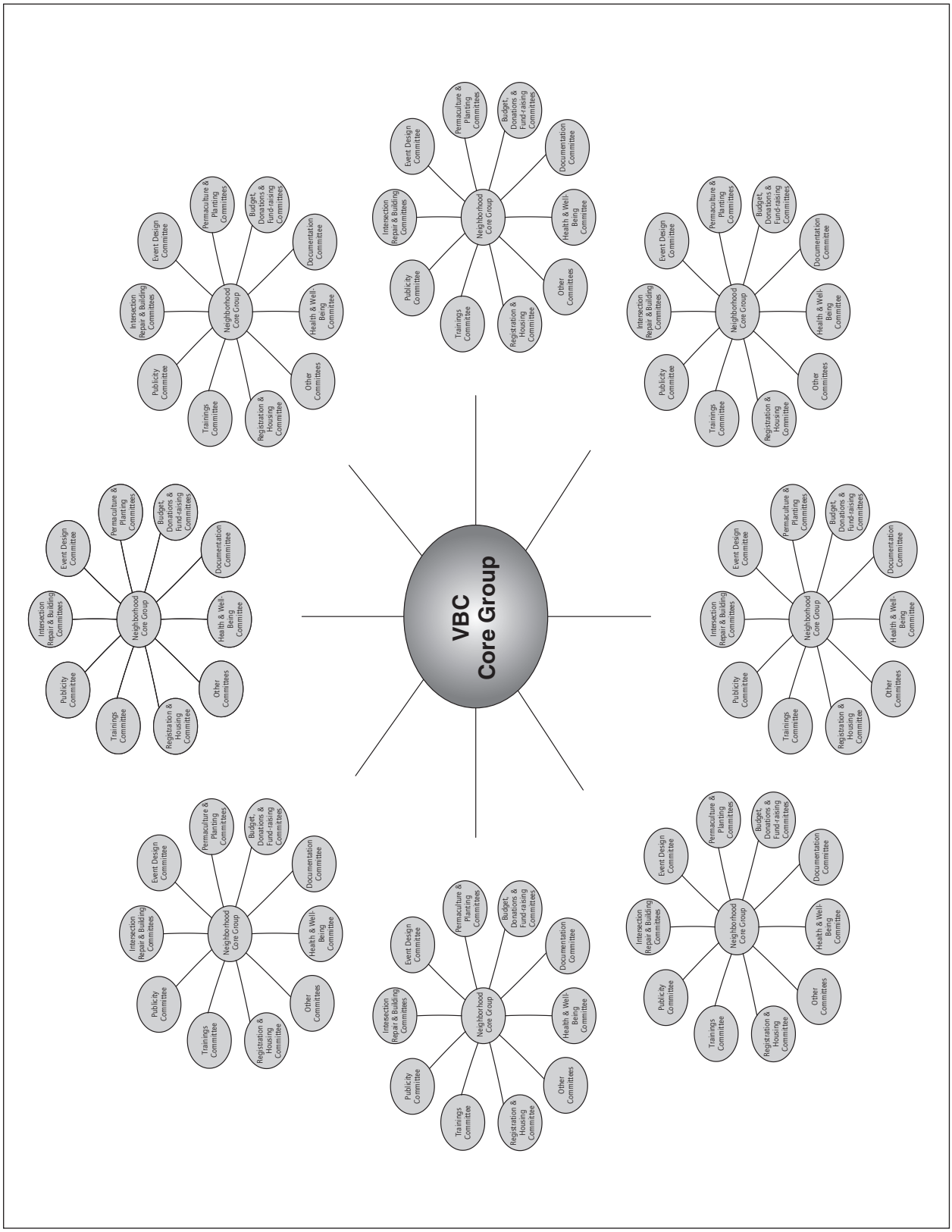

FIGURE 4B Structural Network of Neighborhood Groups to Village Building Convergence (VBC) Core Group

TABLE 2
Community-Initiated Urban Design Features in Portland Neighborhoods, Oregon, 2003

Sunnyside	*Buckman*	*Richmond*	*South Tabor*
Street mural: sunflower	Street mural: labyrinth	2 cob bench and/or planters on intersection park	Cob oven with a mosaic floor (on the private property)
Cob information kiosk	Information cob kiosk	8 planter boxes with cob siding to narrow street	Straw-clay shed for storage (on the private property)
Stained glass mosaic art wall with solar powered fountain	Permaculture activities	Lawn chess board	
3 trellises and 1 dome structure	Cob bench (on private property)	Labyrinth	
8 planters in streets		Sauna (on private property)	

stakeholders such as neighborhood associations, community centers, and local businesses. Furthermore, the outreach efforts were initiated too late in the process. The consensus decision-making process threatened the implementation of two projects until they were moved from the public right-of-way onto private property, accessible to the public. We recommend that ample time be devoted to outreach to allow for the process to take its natural course.

DISCUSSION

The social cement that held people together through communal ties, close relationships, collective norms, and shared values is declining in the setting of urban neighborhoods leading to progressive erosion of social capital. Therefore, it has become essential to engage neighborhood residents in a revitalizing process that promotes social cohesion and generates a sense of belonging and community. Neighborhoods comprise a diverse population with people differing on demographic variables such as age, gender, race, and ethnicity, and socioeconomic variables such as income, occupation, educational level, and employment. Hence, such community-based interventions need to be carefully designed, highly organized, and implemented through collective efforts to address the needs of diverse populations.

The neighborhood interventions carried out in Portland, Oregon, provided a common ground that allowed people to rise above differences, develop deeper relationships with each other and their neighborhoods, and create vibrant neighborhood communities. Neighborhood residents worked collectively with each other to strengthen localized social capital and communicated with various organizations and professionals beyond the immediate social environment to build bridging social capital. The process begins with a situation analysis and extensive outreach to community members and other stakeholders as part of asset mapping (Green & Kreuter, 2005; McKnight & Kretzmann, 1997). The next step is to conduct informational meetings in the neighborhoods to provide information on similar neighborhood projects implemented in the past and assist them in developing a common vision for their project. The informal meetings play a key role in bringing people together, promoting discussions, and, subsequently, building localized social capital. Project organizers, architects, and natural builders assist neighborhood groups in developing designs for their projects during the design workshops. Organizers help them acquire materials for the projects, complete the city permitting process, and, subsequently, help them complete the projects during a coordinated workshop, synchronized with other neighborhood

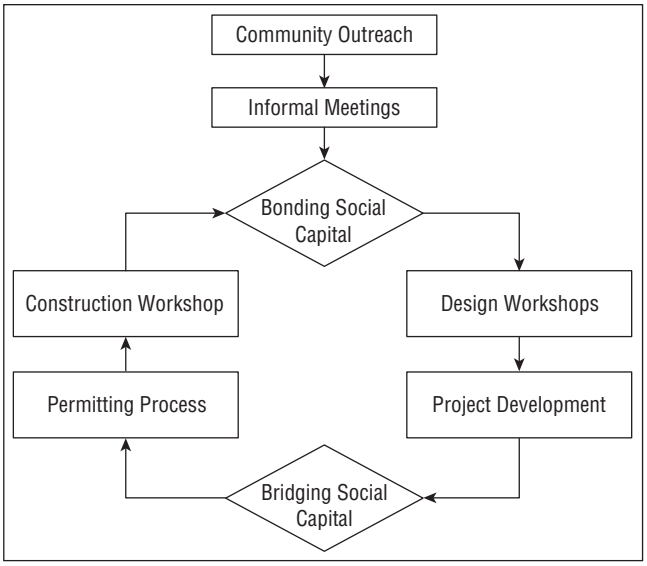

FIGURE 5 The Social Capital Sustainability Cycle

TABLE 3
Organizational Structure: Committees, Members, and Their Functions; Village Building Convergence 2003, Portland Oregon

Committee	*Members*	*Main Duties & Functions*
Intersection repair (IR)	Coordinator	Oversees coordination of all stakeholders in IR projects and activities at all IR sites
	Site coordinator	Oversees activities of site and coordinates between core group and site-related people. Oversees activities and collects demographic data of volunteers
	Design coordinators	Works collectively with several groups to integrate design pieces and produce the final architectural designs
Building	Coordinator	Oversees and coordinates all building projects, responsible for acquisition and distribution of materials
	Natural builders	Assist in design process, educate volunteers, organize building activities, and responsible for completion of projects
	Building assistants	Assist in building process
Event design	Event organizers	Responsible for finding facilities for meetings, scheduling meetings and free-time events, procuring necessary equipment and arranging logistics
Permaculture	Coordinator	Oversees and coordinates all permaculture projects
	Permaculturists	Work collectively with other groups to integrate permaculture principles and ethics into site design
Planting	Coordinator	Oversees and coordinates all planting activities
Budget	Accountant and/or Bookkeeper	Responsible for balancing project-related accounts and tracking income and expenditures
	Administrator	Responsible for arranging travel itinerary and expenses for speakers, issuing contracts, and providing logistical support
Donations	Coordinator	Responsible for requesting and acquiring donations from various sources, organizing events to request donations, and sending out "thank you letters"
Fund-raising	Grant writers	Identify funding resources, plan grant writing effort, and organize fund-raising events
Documentation	Coordinator	Responsible for videotaping and photographing projects and events. Works collectively with publicity committee, event design committee, and site coordinators
Health and Well-Being	Coordinator	Organizes first aid kits and protocol for well-being sessions
Registration and housing	Coordinator	Responsible for registering participants, arranging housing for out of town visitors, and coordinating activities for visitors
Training	Coordinator	Coordinates trainings for Village Building Convergence (VBC) organizers, neighborhood groups, and trainings during the VBC
Publicity	Coordinator	Works collectively with other groups to get media coverage of events, identifies and organizes events for media coverage, and approves emails, posters and flyers
	Writers	Volunteers promoting specific events
	Web master	In charge of Web site information

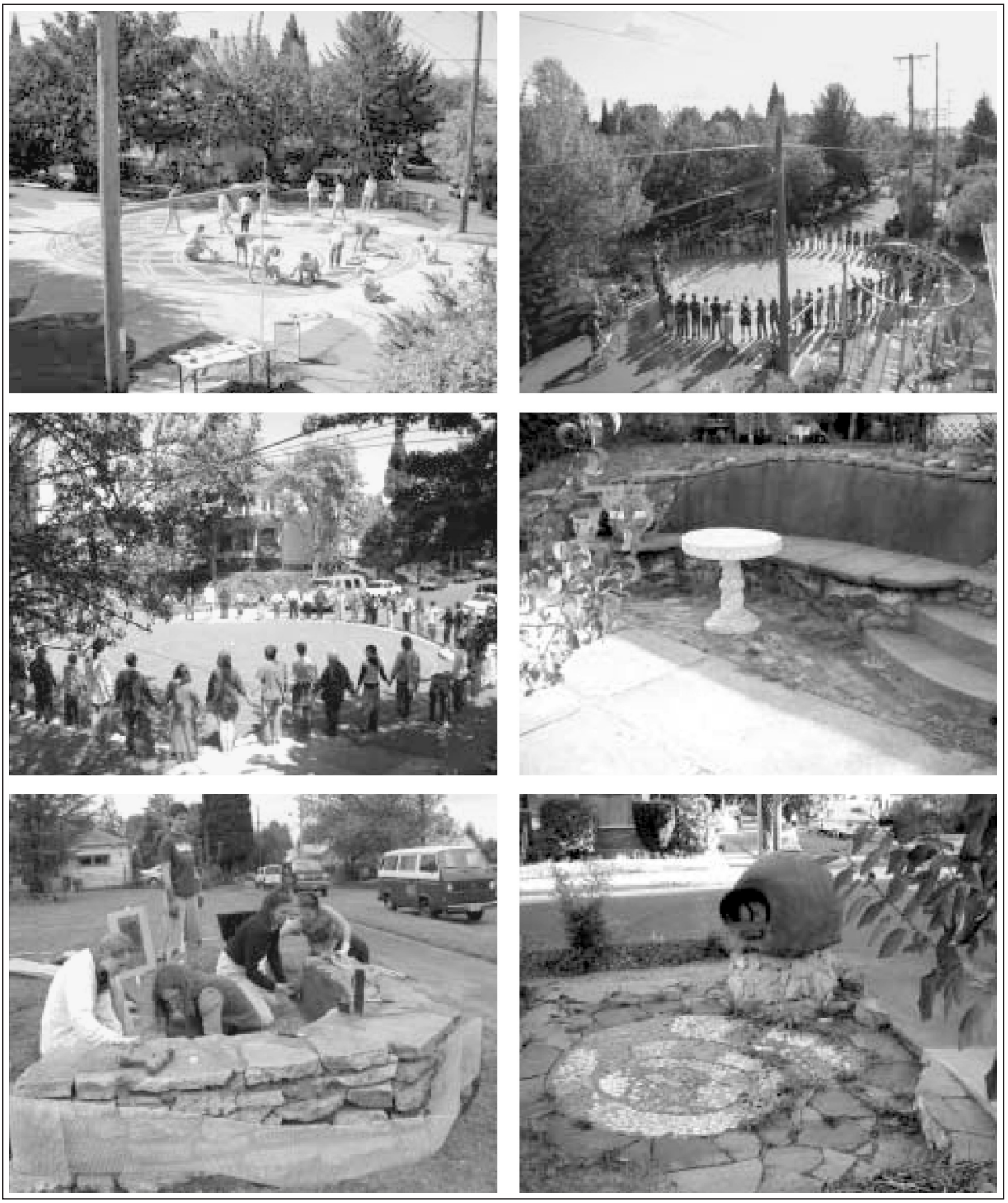

FIGURE 6 Health-Promoting Neighborhood Interventions in Portland, Oregon, 2003
NOTE: From left to right: Sunnyside street mural painting; and community ceremony; Buckman ceremony at street mural; and cob bench; Richmond bench construction; South Tabor cob oven and mosaic.

projects. This process promotes efficient communication between various community groups, organizations, and businesses within and outside the neighborhoods and helps build bridging social capital. The workshop is the collective expression of the social capital that exists within and beyond the neighborhoods, which, in turn, enhances existing social ties in a social capital sustainability cycle (Figure 5).

CONCLUSIONS AND RECOMMENDATIONS

Community initiated health-promoting interventions build social relationships, empower neighborhood residents, and enable them to collectively solve local problems in collaboration with various stakeholders within and outside the community. Although all of these projects build community in similar ways, they might vary according to each neighborhood's composition and expression of their local culture (Figure 6). For these projects to be successfully implemented, and institutionalized, they should be tailored to address the needs and norms of the individual neighborhoods. Our recommendation is to analyze the characteristics and needs of individual neighborhoods based on the concept of social capital and its constituent elements to design and successfully implement a health-promoting neighborhood intervention that is specifically tailored for a neighborhood. Such interventions should be applied in different settings to increase physical activity and social interactions and may help to reverse chronic diseases including obesity, diabetes, and depression.

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