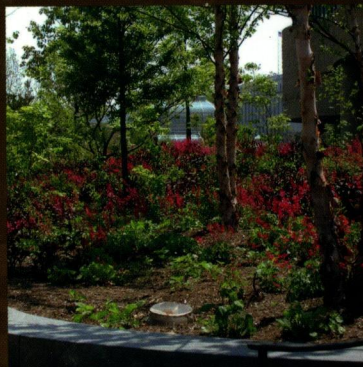
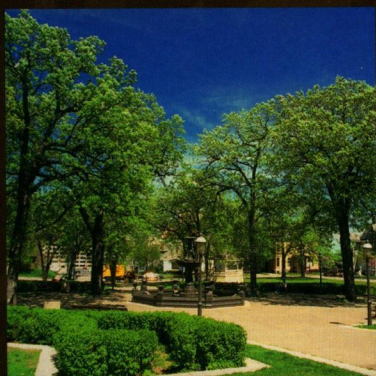


Designing Small Parks



*A Manual for Addressing
Social and Ecological Concerns*

Ann Forsyth
Laura R. Musacchio

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■ AN INTRODUCTION TO SMALL PARKS

Small parks are a key part of most neighborhoods, but they typically provide mostly recreational benefits. With demographic and cultural changes and an increase in ecological awareness, those involved in designing, redesigning, and maintaining parks need to understand the multiple roles that parks can play as part of the public space and ecological networks in the metropolitan landscape.

By definition small parks have limited areas, so they cannot meet all the potential demands for space for varied human activities and multiple natural processes. Helping those involved in planning, designing, and managing parks to understand where it is easy to serve multiple purposes and where it is more difficult is an important aim of this manual.



Small parks are ubiquitous in the urban landscape, but they are often the most contested spaces in neighborhoods because of limited space for social activities and natural areas.

WHAT THIS MANUAL DOES

Small parks play crucially important roles in metropolitan areas, but their designs rarely reflect all that is now known about people, ecology, and landscapes. This lack of connection to current knowledge is not surprising, as this information is spread across dozens of journals, reported in technical jargon, and has sometimes contradictory prescriptions. There is also a deep division between two key areas of research—*human factors research* (on human interactions with open space) and *ecological research*. This is not merely a matter of specialty or emphasis but reflective of a larger world view.

On one hand, research on social or human factors has focused on human preferences and activities. It has examined both broadly shared attitudes and perceptions, as well as issues of human diversity. Researchers in this area are often concerned with how humans interact with nature, where nature is defined as areas where vegetation is predominant and buildings are inconspicuous (Ulrich 1986). Such areas may be highly maintained, cultivated areas such as lawns and flower beds. Most researchers in this area seek to understand people as they are, proposing design and management solutions that will be acceptable to a range of people.

On the other hand, ecological research has focused on large pristine habitats; although there has recently been more research about complex, urban environments. In this area of research, nature is defined as a habitat or ecosystem and, as is discussed later, urban

means an area of human settlement, from a village to a city. For example, scientists may study the urban forest. Due to a tradition of writing many short papers on highly defined topics and a relatively high level of available funding compared with human factors research, there is a very large body of literature in this area. In addition, many papers convey a sense of urgency and moral importance due to concerns about environmental damage and problems with ecosystem health. Ecologists also use a lot of technical terms and jargon, making their work less accessible to people outside their fields. As it is largely humans who cause this environmental damage, research in this area frequently has a far more negative view of people than human factors research. Researchers in this tradition are most likely to propose educating people to appreciate “nature” as it is.

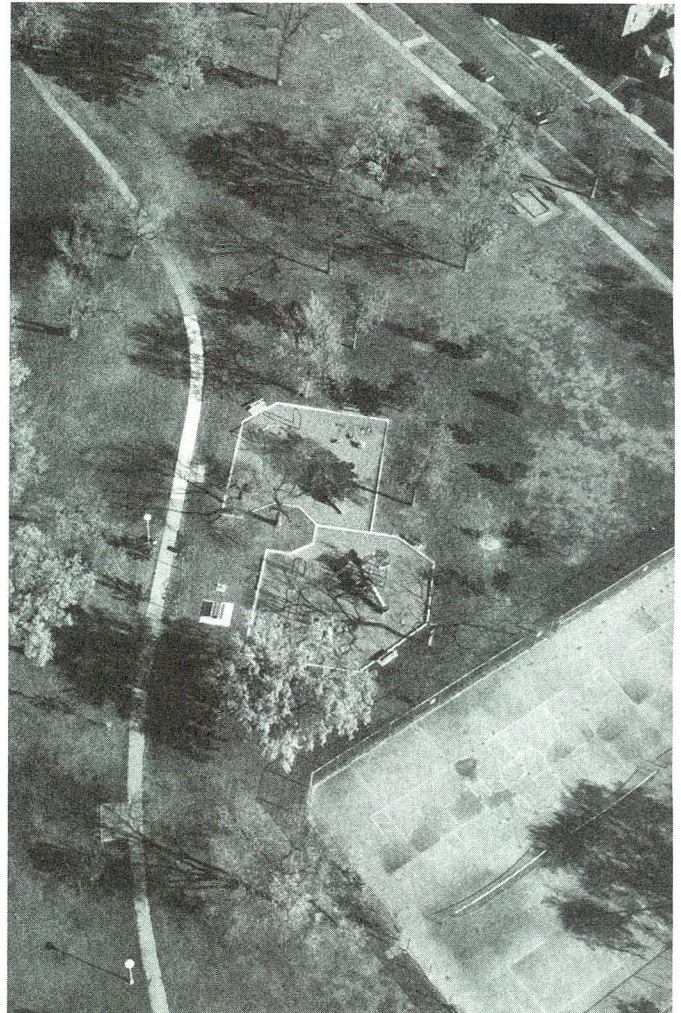
However, many park managers and designers want to tap into both these broad areas of research. They think that this will help them incorporate more ecologically sensitive features, respond to demographic changes, and also save on maintenance costs.

This manual draws on this wide range of knowledge, providing guidelines for building better parks. It provides landscape architects, park designers, parks departments, planners, scientists, and civic groups with a broader palette of design options. The manual is intended for use in the park planning and design process along with other important steps, such as recreational needs assessments and detailed facility designs. Participatory-design and public-involvement processes can draw upon the manual in the early phases of park design and redesign to demonstrate options and trade-offs.

ORGANIZATION OF THE MANUAL

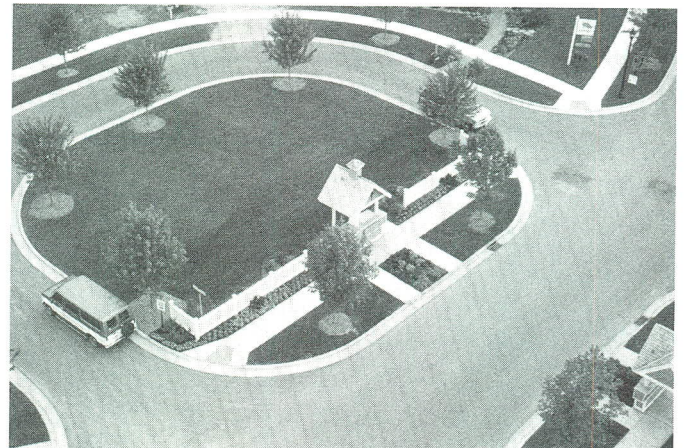
The manual starts with an overview of key issues and terms. The core of the manual is arranged around twelve topics that represent key questions, contradictions, or tensions in the design of small parks.

The treatment of each topic is similar, as each incorporates (1) a short statement of the key design questions in that area, (2) a discussion of the various issues, and



Typical small parks tend to have play areas, scattered trees, and sports facilities, and they also have untapped potential for providing more social and ecological benefits.

(3) several specific design and maintenance proposals. Fine-Print Facts outline key research findings relevant to the topic that are too detailed to put in the body of the guidelines. These fine-print facts provide some of the research base for each guideline, and they are arranged to follow the sequence of issues in each topic. Each topic is illustrated. Lengthy captions allow the casual reader to pick up the main points by looking at the illustrations and reading their captions. The topics start with core issues that involve both human and physical dimensions from size and shape to naturalness. The manual then deals with the physical and human environments.



In Seaside, Florida, a classic New Urbanist development, the amphitheater area in the Central Square is a large expanse of lawn. In contrast, centrally located DiBicci Park contains extensive areas where the ground cover between trees is a local mulch that requires less overall maintenance and less water than lawn. Overall, the majority of the landscaping in Seaside uses this lower maintenance approach.

The majority of new developments with a New Urbanist philosophy have parks dominated by lawns, and they do not tap into the potential of small parks to be a major social and ecological feature in the neighborhood.

HOW RESEARCH COULD HELP MORE

In spite of this interest in small parks, major gaps exist in knowledge about how social and ecological factors interact in such parks. Social and environmental researchers have noticed these gaps and are working cooperatively to create new knowledge to aid design decision making. The sciences of landscape ecology, conservation biology, restoration ecology, and urban ecology offer new insights on how to design regional park systems to protect habitat, biodiversity, and ecological processes (Burgess and Sharpe 1981; Soulé 1985; Turner 1989; Naveh and Lieberman 1994; Forman 1995; Wu and Vankat 1995; Niemelä 1999; Pickett et al. 1999; Naveh 2000; Zipperer et al. 2000; Turner et al. 2001; Wu and Hobbs 2002; Opdam et al. 2003; Jongman and Pungetti 2004). Designers and planners are highly motivated to integrate new ecological and social principles into urban design and planning (Spirn 1984; Platt et al. 1994; Hough 1995; Steiner 2002). Basic problems exist, however, such as disagreements over the definition of nature or about how to define “urban” and “urban ecosystem” (McIntyre et al. 2000; Grimm et al. 2000). In addition, scientists may be interested in phenomena that are important in increasing scientific knowledge but are not relevant to design. However, with increasing

prominent elements in new urbanist designs include parks, trails, and town squares.

However, while theoretical writings and the most exemplary of the new urbanist developments have embraced ecological values and social diversity, the general practice of new urbanism is not so advanced. Overall, new urbanist developments vary significantly in their level of ecological and social sophistication in park design, and in general their open spaces could perform more ecological and social functions.

1

Design
Examples

Design
Development
Guidelines

Design
Development
Issues in Brief

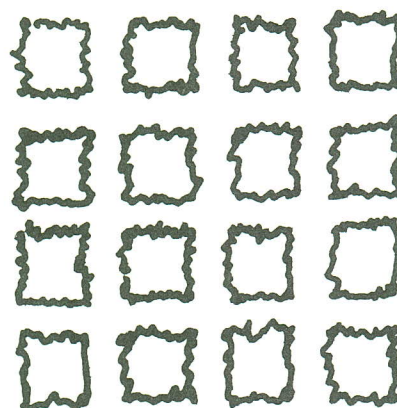
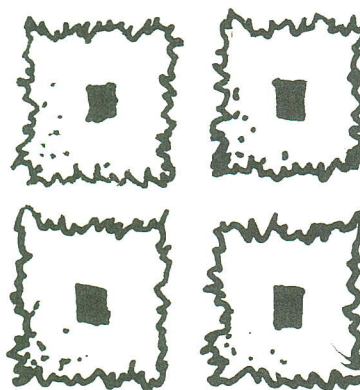
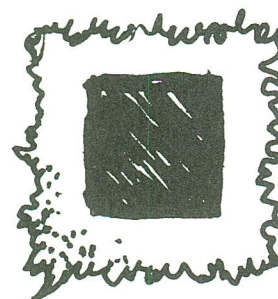
Overview of Park Planning and Design Process

opportunities to enhance any social and ecological benefits. Since small parks are often leftover spaces, their shape may be rather unusual, such as very narrow and long or very jagged with a lot of edge along streets and backyards. This situation represents a management challenge, both ecologically and socially, although providing positive opportunities for human access and connections to naturalness (see Naturalness, pages 42–47).

For an ecologist, park size and scale mean something different than they do for most park designers, planners, and managers. For example, Cole and Landres (1996, 178) defined large reserves as greater than 100,000 hectares. Their definition is based on the scale that is needed to protect wilderness ecosystems and a full complement of species, including large carnivorous predators. In an urbanized setting, a 100,000-hectare-scale park would be an impossibility. Ecologists who study urban ecosystems are aware of this issue, and their concept of scale and park size is similar to that of park designers, planners, and managers. To summarize, large parks for ecologists are generally of a very different scale than what would ever be realistically found in urbanized environments; consequently, it is important to keep this in mind when reading and interpreting the ecological literature, when interacting with ecologists on a professional basis, or when applying ecologists' ideas to the context and circumstances of designing small parks in towns, suburbs, and central cities.

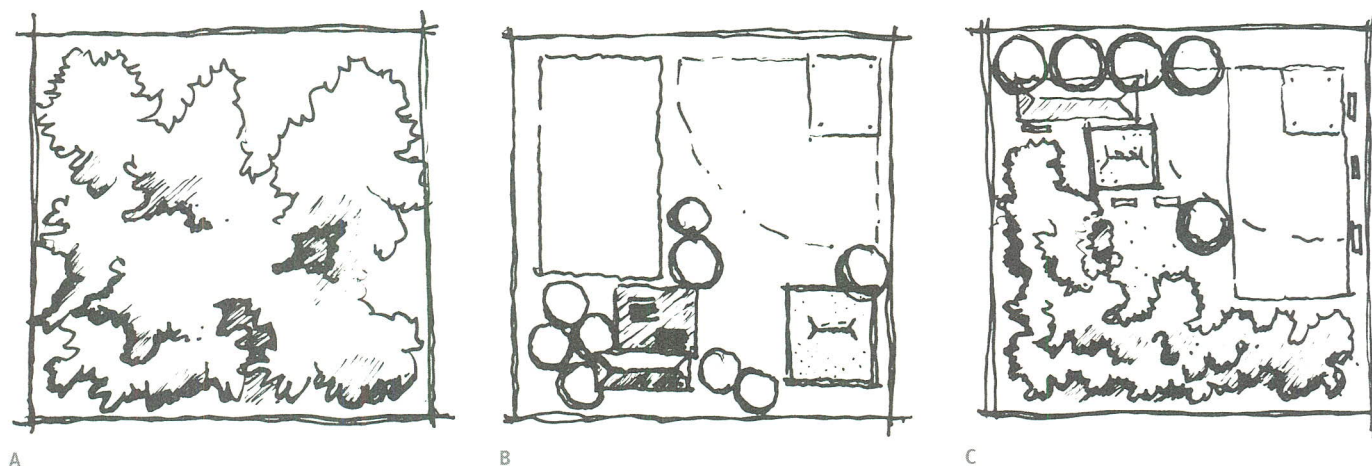
The vocabulary used to discuss parks in ecological literature also differs. The word “reserve” or “bioreserve,” for example, is often used as a substitute for park. Reserves and bioreserves are any type of open space for wildlife on public and private land, such as wildlife management lands, national forest lands, and grassland reserves on farms. Ecologists use the term “reserve design” to describe the planning process for habitat areas and networks. In landscape architecture, the best equivalent term to “reserve design” is “regional design” or “conservation design,” depending on the scale of the problem at hand.

From an ecological perspective, large habitat areas are preferred for reserves or parks because they comprise



The above diagrams illustrate that large patches have a greater amount of interior habitat (area shaded in black) than medium and small sized patches. Small patches may not have any interior habitat, but act as a supplement to larger patches. In general, the number of bird and plant species increases with the number and size of habitat patches. While small parks are, by definition small in size, they can help increase the number of species in an urban area. Based on drawing from Peck (1998, 71) and Soulé (1991, 314).

the widest range of biodiversity, supply opportunities to maintain evolutionary processes, offer maximum conditions for many types of species, and contain habitat for species intolerant of human intrusion, providing a “safety net” for such species (Lindenmayer and Franklin



Examples of alternative park designs. A. A remnant-forest patch before development. B. A traditional park design, with recreational facilities, seating areas, play area, and scattered trees. C. A park with the same features as B, but overlapping and compact uses allow for a larger forest patch to be maintained, providing both ecological and social benefits.

water quality, air quality, or habitat for specific species. Minimum widths will likely also depend on the physical environment of a place—for example, a desert versus temperate forest, slope steepness, and erodibility of soils. See figures 2.12 to 2.14 in the next topic for examples of corridor widths for wildlife, water quality, and air quality conservation.

The following minimum areas and widths for habitat patches have been suggested in somewhat dated studies. Few recent studies provide such data (all cited in Raedeke and Raedeke 1995, 142). It is important to keep in mind that minimum areas and widths for habitat patches will vary from species to species, depending on their life histories:

- 1.4 acres (0.57 ha) for amphibians and reptiles (Dickman 1987)
 - 1.6 acres (0.65 ha) for small mammals (Dickman 1987)
 - 12.5 acres (5.05 ha) with a minimum 200 meter (656 feet) diameter of patch for land vertebrates (Vizyova 1986)
 - 200 meter (656 feet) minimum diameter of patch for many birds that “prefer the interior of forests, and will not successfully nest in small forest patches that consist almost entirely of edge habitat” (Raedeke and Raedeke 1995, 142).
2. Work to create adequate dimensions for multiple programs. Socially, a number of common recreational facilities have required dimensions that while moderately flexible are not infinitely so. From ballfields to play and picnic areas, dimensions matter. This is particularly critical in small parks where there may be room for one baseball field, but there is also a need for volleyball, ice skating, community gardening, and a play area. As we show in the Tighe-Schmitz Park design example, it is possible to overlay multiple programs on the same space, but it requires careful design attention.
 3. To understand the origin of small parks in specific regions, historic patterns of urbanization and landscape fragmentation can be studied through the use of historic maps, documents, and oral histories. Such research can help identify how long existing parks have been isolated from the region’s natural habitats, what ecological features can be restored, such as drained wetlands or buried streams, and ways to link small parks to larger open-space systems. For example, digital orthophoto quads (digital aerial photographs) are a valuable source of information about land-use and land-cover changes in the United States. University libraries often have archives of paper aerial photographs from the middle of the

DIMENSIONS OF VARIOUS RECREATIONAL FACILITIES

Sport	Use area required/including clear zones	Playing area/Court dimensions
Basketball	None specified	25,603.2 × 15,240 mm for high school (84 × 50 feet)
Bocce	5.7–7.7 mm × 24.6–30.3 m (19–25 ft 6 in × 82–101 ft)	3,962.4–5,791.2 mm × 23,400–27,600 mm (13–19 ft 6 in × 78–92 ft)
Football	Minimum 51.6 × 111.6 m (172 × 372 ft)	48,768 × 109,728 mm (160 × 360 ft) [Including two 9 m (10 yd) end zones]
Tennis	18,000 × 36,000 mm (60 × 120 ft) for one doubles court. Multiples can be designed with 3,000–3,600 mm (10–12 ft) between courts	10,972.8 × 23,774.4 mm (36 × 78 ft)
Volleyball	15,000 × 24,000 mm (50 × 80 ft) preferred; (42 × 72 ft) acceptable	9,144 × 18,288 mm (30 × 60 ft)

Adapted from Harris and Dines (1998, 520–7, 520–11).

twentieth century and historic maps from even earlier that can help establish a baseline for a region.

- During the planning stages of new communities, do all that is possible to maintain the integrity of large patches of habitat in the open-space plan to preserve effective patch size and to protect core habitat from edge effects. In doing this, pay attention to where the park is located in relation to other natural areas. As many ecologists emphasize, larger patches have more species. However, small parks do have value as this manual outlines, and
- When acquiring land for a public parks system, the shape of open space fragments is an important consideration for estimating the amount of interior habitat and types of ecological interactions with the surrounding matrix. Estimate the amount of interior habitat versus edge through calculation of the perimeter to area ratio of the park. Certain shapes naturally have more interior habitat, such as circles

DISTRIBUTION OF LAND AREA, NUMBER OF SPECIES, AND SUMS OF BIODIVERSITY SCORES AMONG SIZE CLASSES OF ISLANDS OFFSHORE FROM HELSINKI, FINLAND

Size class (ha)	Number of islands	Total area (ha)	Number of species	Sum of biodiversity scores
0.01–0.09	28	1.8	162	8.7
0.1–0.99	83	38.6	323	67.5
1.0–9.9	76	239.4	555	259.6
>10.0	20	1172.3	648	350.2
Total	207	1452.2	686	686.0

Source: Ranta et al. (1999, 1296)

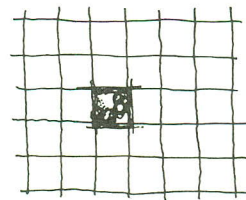
Ecological Issues

Matrix and Corridor Approaches: One of the potential problems with small parks is a lack of connections with other open spaces and a large amount of edge habitat in relation to its size. Both conditions lead to less than ideal ecological conditions, and there are two general concepts in the ecological sciences and landscape architecture that have been proposed to improve connections between the park and other green areas: (1) the matrix approach (Franklin 1993; Lindenmeyer and Franklin 2002) and (2) the corridor approach (McHarg 1969; Little 1990; Smith and Hellmund 1993; Jongman and Pungetti 2004; Fabos 2004). Both have their supporters and detractors and because of the complexity of the debate, this topic is briefly reviewed for the most important issues, concepts, approaches, and trends that influence park design, planning, and management.

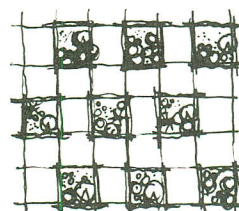
The *matrix approach* emphasizes that parks can be improved by conceptualizing each park as embedded in its surrounding “matrix” of land parcels. Franklin, a landscape and forest ecologist, has been one of the most important proponents of the matrix approach in the ecological sciences, and his classic article (1993) identified the importance of matrix conservation of human-dominated landscapes, such as farmlands and cities, that are built on the most biologically productive lands. He sees matrix conservation as an alternative to the *corridor approach* as well as the *reserve approach*, which was discussed in Size, Shape, and Number (see page 15). The matrix approach has merit because the population levels of some species are sensitive to general land use and vegetation changes across the larger context area or matrix. Willson and Dorcas (2003, 768) point out that salamanders are one of these species:

Our data suggest that, although the size of a buffer around a stream may have some effect on the relative abundance of salamanders, the amount of undisturbed habitat present within the entire watershed has the greatest impact on salamander abundance.

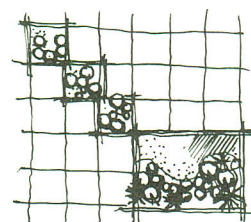
Small parks can have different levels of connection to other parks and open spaces.



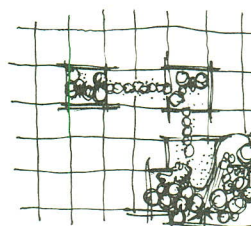
A single park may have no connections to other green spaces.



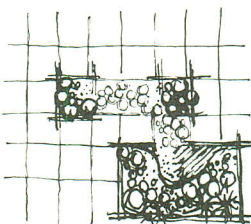
Parks may take up a large amount of area but still have a lack of connections to other parks.



Several small parks may be visually aligned with and connected to a larger park.



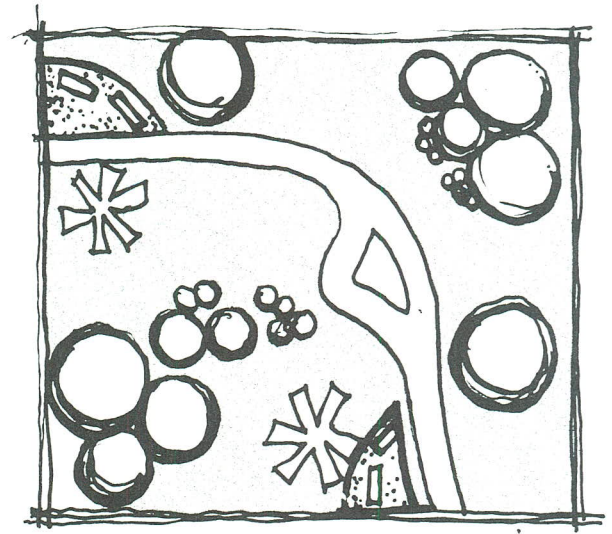
Parks may be connected by a thin corridor such as tree-lined streets, which enhance connectivity.



Parks may be connected by a wide corridor such as a greenway, which is the highest level of habitat connectivity of the five schemes illustrated.



In this green space, a path leads by benches in the shade. Pedestrians can choose whether or not to talk with people on the benches, and those sitting can watch people as they pass. *Source: Ann Forsyth, used by permission.*



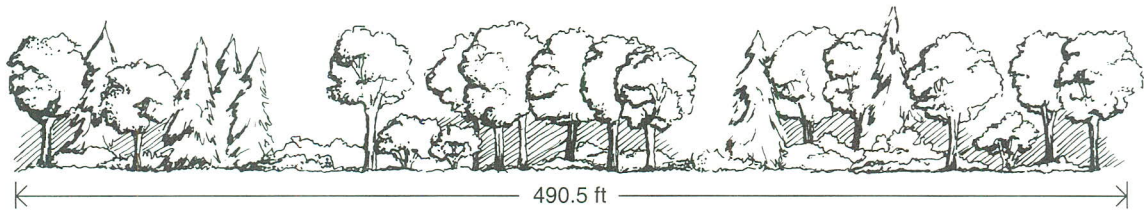
A design showing the plan of a park designed for social connections. A path takes visitors through the park, allowing them to choose whether or not to stop at seating areas near the park entrances, marked with an asterisk.

are enhanced. For people, visual cues and signs should indicate what is within the park if it is not immediately obvious (Kaplan et al. 1998, 85). Once within a park, views outside the park should show connections to the wider environment; although it may be useful to frame views to maximize the sense of being away by at least partially buffering such elements as parked cars.

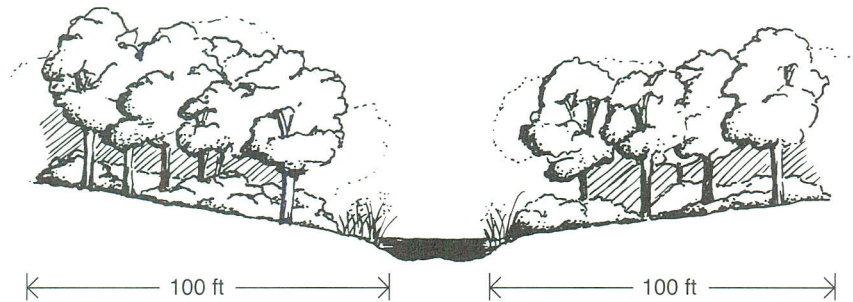
2. Maximize the benefits for social connections, including sharing space without further interaction, by allowing nonthreatening coexistence between people who may share common interests. For example:

- Place seating where people can watch a tot lot or pond, providing options for more intensive socializing if desired.
- Design paths that go past seating areas, allowing people to scan the area to decide whether or not to stop (Cooper Marcus and Francis 1998, 92–93).
- Place seating near heavily trafficked areas, such as park entrances, to allow opportunities for higher levels of interaction (Cooper Marcus and Francis 1998, 93).

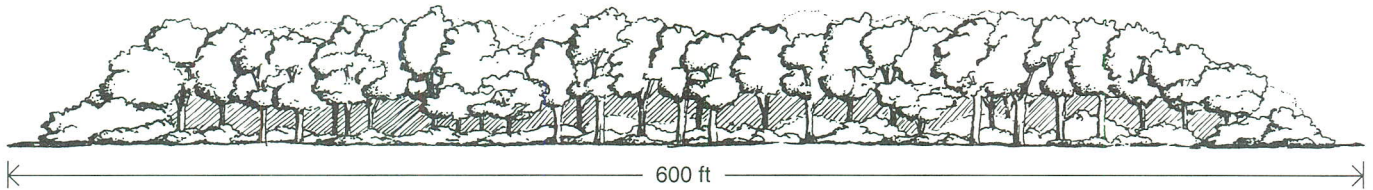
- Create landmarks or areas that can be easily described to others. Such landmarks can become meeting places (Cooper Marcus and Francis 1998, 91).
3. Conceptualize the park as a patch in a habitat network and matrix, that is, as part of a system of parks; tree-lined streets; paths and trails; rivers, gullies, and creeks; remnant or volunteer stands of trees; and connected yards. While a small park has only limited ecological value on its own, it can help connect other green areas into a larger system. To maximize this value, it is important to reinforce any surrounding green areas. If there are such nearby green areas, then plantings within the park should be placed near them to increase the impression of overall continuous areas of green. Also, consider how ecological processes could be restored, such as by daylighting a stream or revegetating vacant lots.
 4. When designing and planning for corridors to small parks for wildlife, determine what the ecolog-



In one view, the ideal width of a corridor for improving air quality is 490.5 feet (150 meters) (Smith 1976, 297–298), although others see it as context dependent. Ideally, to improve air quality, a mix of deciduous and coniferous vegetation is present within the corridor.



For stream protection, Schuler (1995, 11) states that a minimum width of 100 feet (30.5 meters) be used as a buffer along stream edges. However, it is important that the entire floodplain occurs within the greenway, so the ideal width of the corridor will vary with the situation.



Corridor width depends on the needs of different species. In general, wider corridors have greater benefits than narrow ones (Lindenmayer and Franklin 2002, 113–114). Based on a study by Budd et al. (1987), Adams and Dove (1989, 29) recommend a minimum width of 100 feet (30.5 m). However, Schueler (1995, 97) states that “to be most effective, a wildlife corridor should be 300–600 feet [91.7–183.5 m] wide.” Overall, all minimum widths depend on the context of the area in terms of vegetation and the needs of specific wildlife likely to be present in urban areas.

- “Blocks of habitat close together are better than blocks far apart” (99).
- “Habitat in contiguous blocks is better than fragmented habitat” (99).
- “Interconnected blocks of habitat are better than isolated blocks” (102).
- “Populations that fluctuate widely are more vulnerable than populations that are more stable” (103).
- “Disjunct or peripheral populations are likely to be more genetically impoverished and vulnerable to extinction, but also more genetically distinct than central populations” (104).
- “Maintaining viable ecosystems is usually more efficient, economical and effective than a species-by-species approach” (106).
- “Biodiversity is not distributed randomly or uniformly across the landscape. In establishing protection priorities, consider ‘hotspots’ ” (107).
- “Ecosystem boundaries ideally should be determined by reference to ecology, not politics” (108).
- “Because conservation value varies across a landscape, zoning is a useful approach to land-use planning and reserve network design” (109).

Wider corridors are better but narrow corridors have some benefits

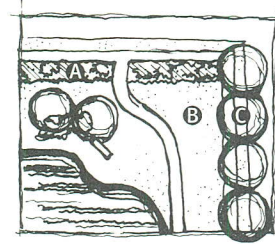
Lindenmayer and Franklin describe general guidelines for wildlife corridors in forests:

“Much wildlife corridor research has focused on identifying minimum corridor widths (e.g., Harrison 1992). This is because of the positive correlation between corridor width and the abundance and/or species richness for birds, mammals, and invertebrates (e.g., Stauffer and Best 1980; Dickson and Huntley 1987; Cale 1990; Keals and Majer 1991; Keller et al. 1993; Vemeculen and Opsteeg 1994). Corridor widths can also influence the dispersal behavior of some

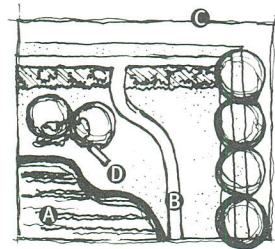
some understory, while maintaining neatness and views. The most useful design cues will set “expected characteristics of landscape beauty and care side by side with characteristics of ecological health” (Nassauer 1992, 248). For example, in a case of rehabilitating an urban park (represented by Design Example 2, pages 111–115), the “ecological” option includes a formal path with a circular focal point showing that design for habitat does not need to look naturalistic, but it can have a more formal appearance.

3. Develop educational opportunities with interpretive signage to demonstrate how beauty and ecological function can be used as a communication tool for park management and maintenance. Novel approaches for framing the “appearance of ecological function” should be considered (Nassauer 1997, 78; 1992). For example, a butterfly garden can be used to educate the public about the vital role of pollination and pollinators in the landscape. A second example is the daylighting, or uncovering, of a stream that is buried in a culvert. The stream can be used as a living laboratory for students and as a stormwater management strategy.
4. Provide walking paths with different sensory experiences along the edges, for example, by using flowering trees and shrubs. Along walking paths, consider how the habitats could be modified to reveal sensory experiences and ecological function season-by-season. For example, the vegetation structure of the different types of plant communities could be modified. In temperate climates, gaps could be created along a woodland trail for flowering prairie perennials. In arid climates, additional plantings of drought-tolerant flowering perennials could be added.
5. Provide a variety of sensory experiences that change with time and vary across the park. Provide opportunities for watching urban wildlife, such as birds and other pollinators. A permanent water source can attract a wide range of organisms.

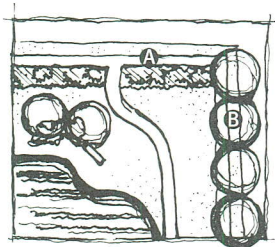
The same park can provide a variety of sensory experiences.



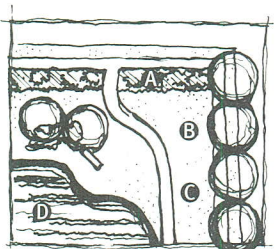
Smell: A. Flowering perennials and annuals provide a scented border along the sidewalk. B. Freshly mown grass can be smelled after the lawn has been cut. C. In the spring, flowering trees will perfume the air.



Sound: A. Sounds of ducks and splashing water can be heard near the pond. B. A gravel path crunches as it is walked on. C. The sound of passing vehicles can be heard near the street. D. A bench is located in a place of relative quiet.



Sight: A. Flower beds provide a range of colors and textures. B. Leaves change color with the change of seasons.



Touch: A. A variety of flower types provides several textures. B. The expanse of lawn provides a soft area for relaxing. C. The rough texture of the gravel path contrasts with the soft lawn surrounding it. D. Water provides a cool and refreshing texture.

Overview of Park Planning and Design Process

- 1 Size, Shape, and Number
- 2 Connections and Edges
- 3 Appearance and Other Sensory Issues
- 4 Naturalness
- 5 Water
- 6 Plants
- 7 Wildlife
- 8 Climate and Air
- 9 Activities and Groups
- 10 Safety
- 11 Management
- 12 Public Involvement

9

Activities and Groups

ISSUES

People vary in how they use parks, the activities that they engage in, and the groups that they visit parks with. In small parks, there is a large potential for conflicts between these activities. Some activities do not take up much space, for example, sitting on a park bench. However, others require larger areas. Some peo-



Parks can provide space for informal groups of people to relax and socialize. Source: Ann Forsyth, used by permission.

ple go to parks as individuals and pairs; but others use parks with peer groups or with large, extended families. Recently, the role of parks in active living has come to some prominence, and while it is not clear that access to parks increases physical activity, parks do provide unique opportunities for recreation. Careful design can go some of the way toward enabling spaces to be used



Parks provide a place for people of all ages to gather and socialize and are particularly important for children and older people. The men in this photo enjoy a game of dominoes. Source: Ann Forsyth, used by permission.

Overview of Park Planning and Design Process

1	2	3	4	5	6	7	8	9	10	11	12
Size, Shape, and Number	Connections and Edges	Appearance and Other Sensory Issues	Naturalness	Water	Plants	Wildlife	Climate and Air	Activities and Groups	Safety	Management	Public Involvement

12

Public Involvement

ISSUE

Members of the public participate in small parks by using them. However, the public also increasingly lobbies for park funding, gives input on park design and rehabilitation, and even helps with park cleanup and light-maintenance activities. Designing for and maintaining this public involvement is an important role for parks professionals. This encompasses many activities, including involving the public in design, developing friends groups and others to help upgrade parks, and providing environmental education.

BACKGROUND

Public and Designers

Park planning and design is a complex process. This manual on the physical design of small parks deals with only part of that process. Before a small park is designed or redesigned, typically a needs assessment is performed, particularly if the main focus of the park is recreation. After parks are designed they are then con-

structed, maintained, programmed, and eventually rebuilt. Design affects all these later activities and is meant to support maintenance and programming, but it is also a separate endeavor.

While large parks are the emphasis of park planning at a metropolitan and regional level, many municipalities develop open space, parks, and recreation plans in which small parks play an important role, providing opportunities for play, athletics, socializing, and interacting with nearby nature. The public are often invited to participate in these wider planning processes as steering committee members, workshop participants, or in making formal responses to plans. At the more detailed stage of the physical design of small parks, designers frequently use similar strategies for public involvement.

Public involvement is often controversial. Public involvement with fundraising and advocacy can be seen as a poor substitute for reliable base funding. Public involvement in cleanup and maintenance activities may be seen as unreliable or, if too reliable, then threatening the jobs of government workers. In programming, many fear that well-organized proponents of particular

Overview of Park
Planning and Design
Process

2

Design
Development
Guidelines

Design
Development
Issues in Brief

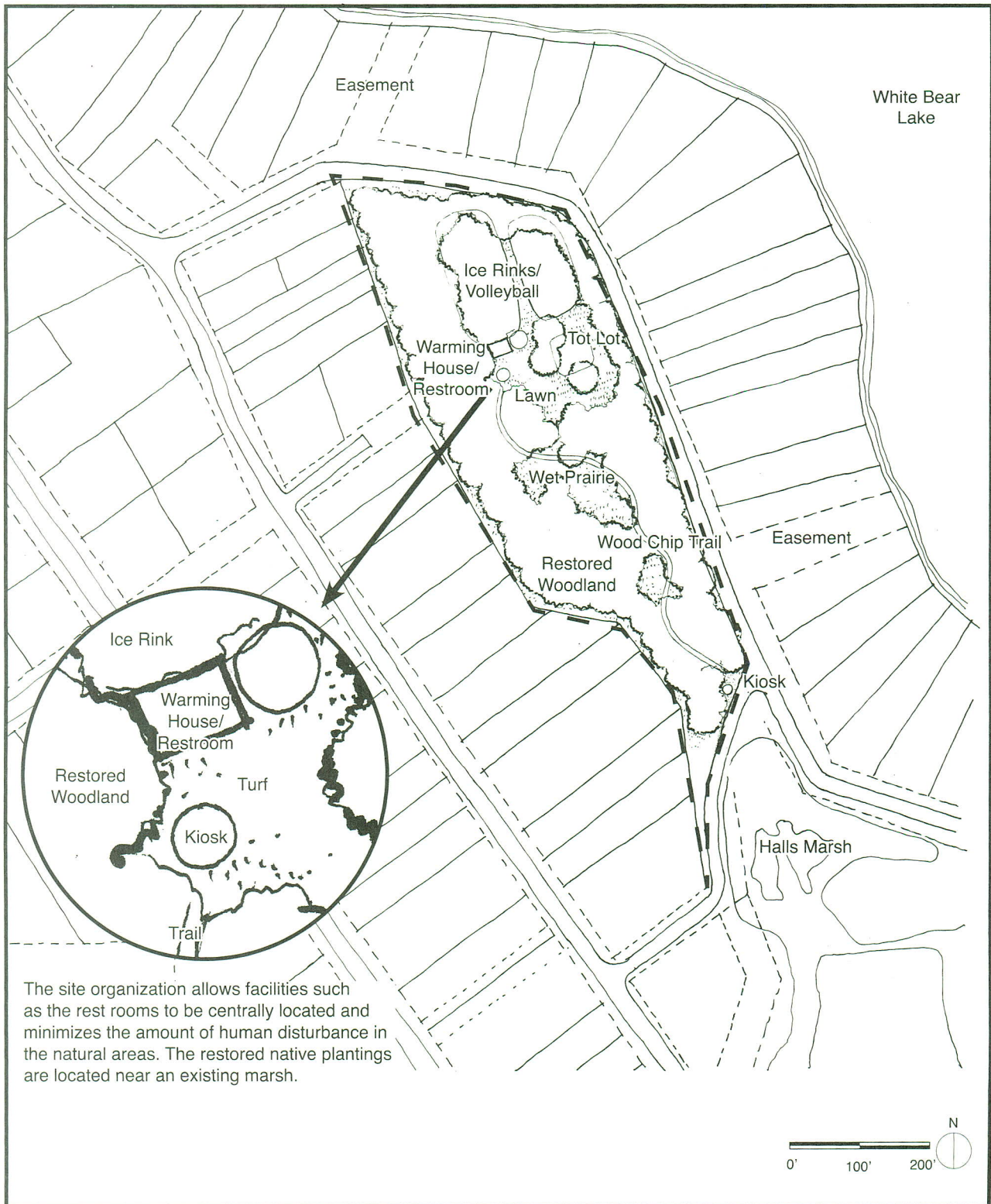
Design Examples

The following design examples illustrate how the guidelines (Design Development Guidelines, pages 137–147) can inform designs of small parks. The sites represent a wide range of typical types and conditions, from a new suburban park with a stormwater pond serving as its central feature to an inner-city park located in the heart of a large Latin community to a temporary park, anticipated to last only a few years. The designs, while responding to their specific locations, were created to demonstrate a conceptual point—park designs turn out differently depending on the underlying priorities of the designers. To do this, each of the example sites was approached through three lenses: ecological, social, and a middle ground using both ecological and social perspectives. The ecological lens illustrates ways small parks can be designed to maximize habitat potential, improve water quality, and help air quality. The social lens takes into account the numerous studies about human preferences with regard to open space and how parks can be best designed for use by a wide variety of ages, ethnicities, and abilities. Finally, the middle-ground solutions illustrate the compromises that must often be reached when designing small parks. In some cases, elements are lost; while in other cases, elements are strengthened when ecological and social needs are similar.

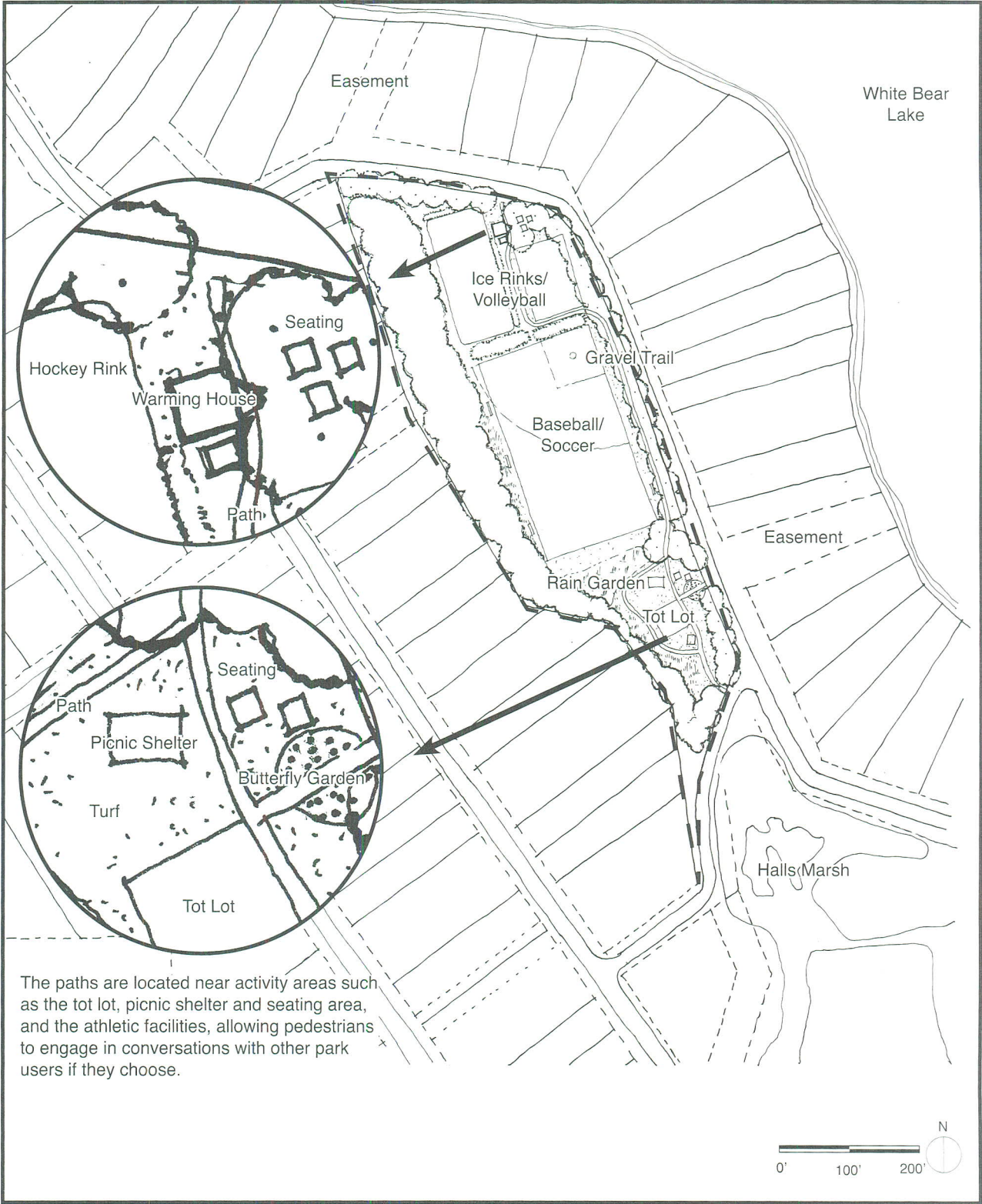
These design examples are similar to the case studies used in instruction, where students learn by grappling with a scenario. In these examples, we show how different design outcomes can be produced for the same site, depending on the issues that are emphasized. The examples also show that the middle ground is not always the best of both worlds but reflects a distinctive compromise position. Each of the examples is organized in a similar fashion. An introduction describes the park, the context, and other background information about the park. Next, we list the core issues with regard to design of the park. Included are the key tensions between the social and ecological aspects of the park. Finally, three designs are presented for each site: an ecological, a social, and a middle-ground strategy. Key features are described in text and on annotated illustrations.

The designs for the examples incorporated several of the guidelines that were presented in the manual. For more detail on the guidelines, see each individual topic or Design Development Guidelines (pages 137–147).

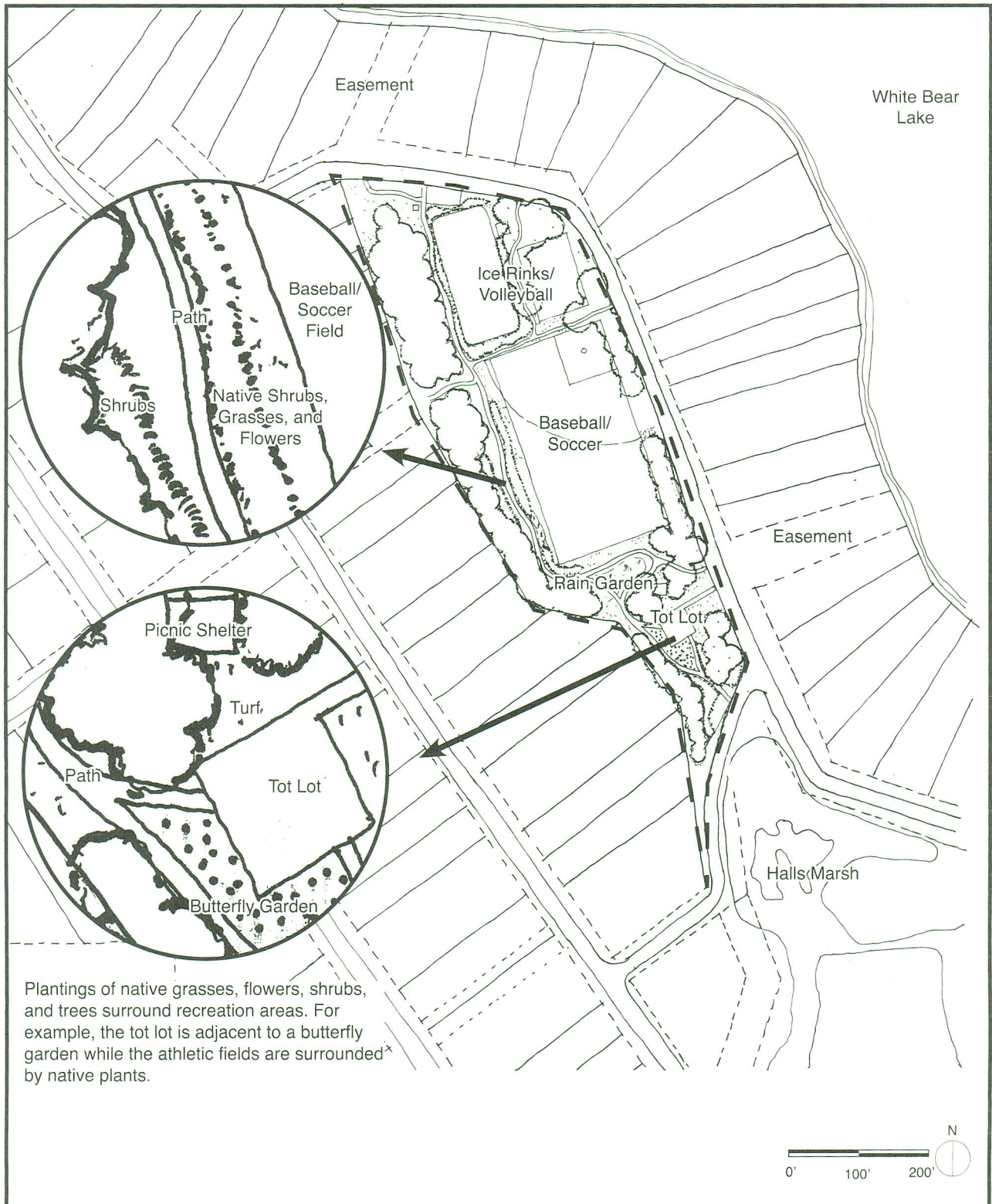
The sites for the examples are located in the metropolitan area of Minneapolis-St. Paul, Minnesota, the location of the authors. While the site designs reflect the Midwestern locale, the design processes and use of guidelines can give insights into the design of parks in other landscapes as well.



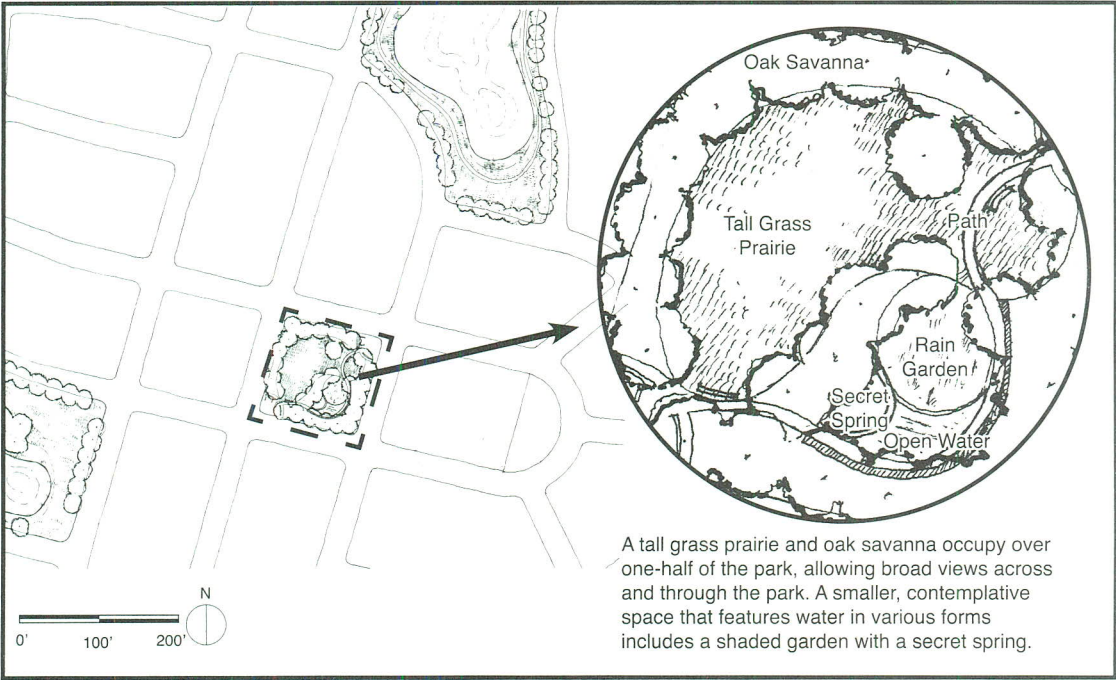
The Ecological Strategy: In this design some of the existing athletic facilities are replaced with a restored wet prairie and woodland. Activities that draw large numbers of people, such as the ice rinks and play area, are concentrated at one end of the park. A path made of wood chips in drier areas and a boardwalk in wetter areas provides an opportunity to appreciate nature and a physical link to all of the park's amenities for the neighborhood's residents.



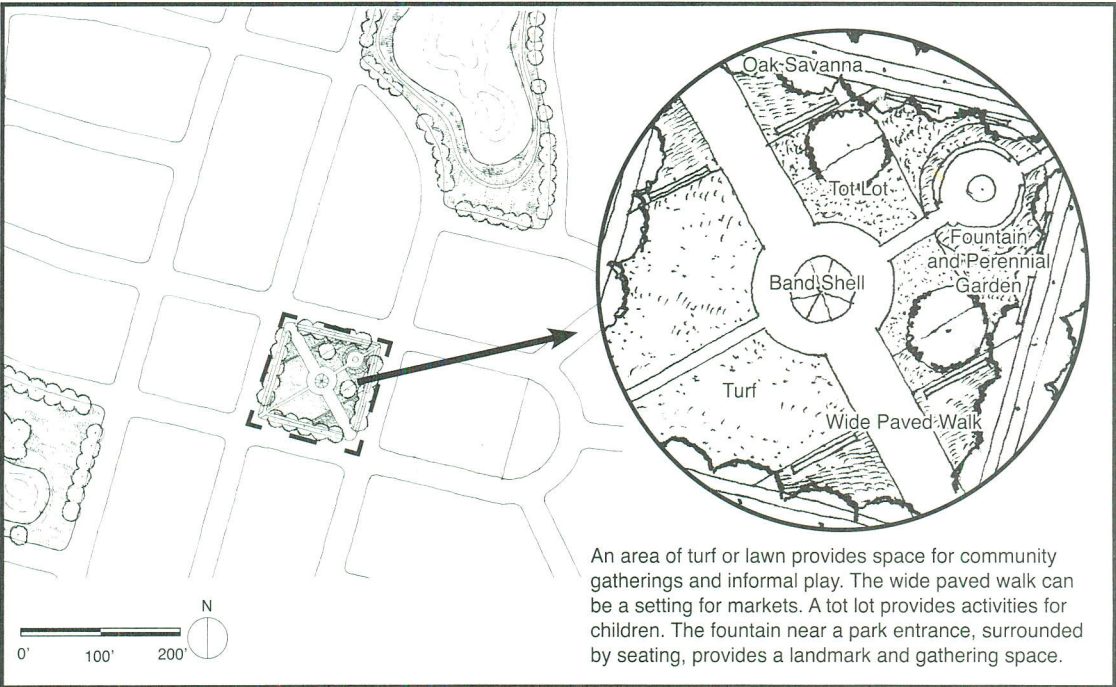
The Social Strategy: In this design all of the existing athletic facilities remain. Gravel paths and seating areas are added to allow for more varied activities by groups of different ages.



The Ecological + Social Strategy: In this design all of the existing athletic facilities remain; however, native grasses and flowers have been incorporated in between them so that the athletic fields are essentially “cut out” of a natural landscape.



The Ecological Strategy: In this design, the planting plan for the park reflects a symbolic connection to the community's ecoregions that include tallgrass prairies and oak savannas.



The Social Strategy: The design for the park provides opportunities for as many different activities as possible, ranging from benches for individuals to a wide, paved walk and a lawn suitable for larger events.

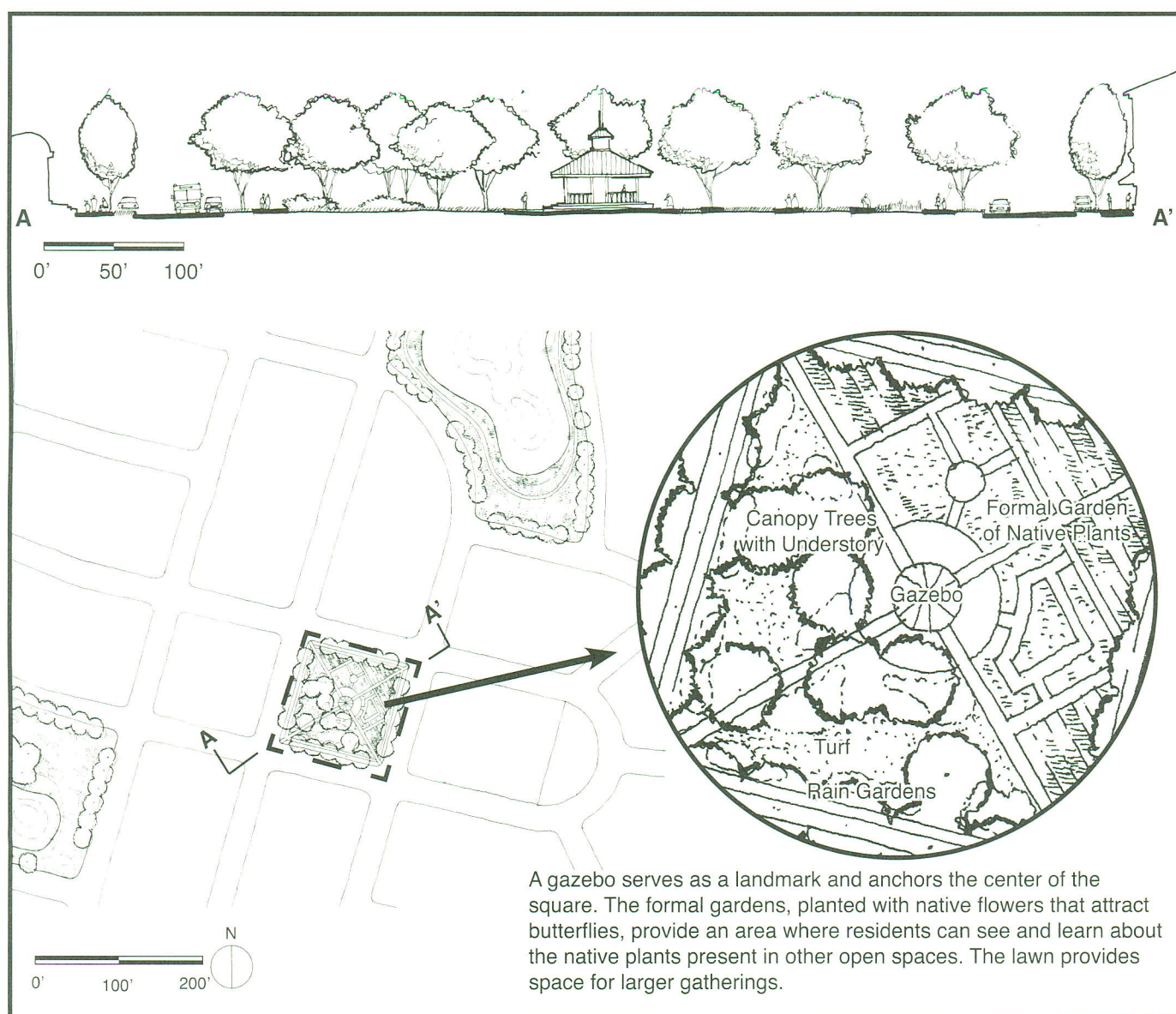
Plantings

- The perennial garden will include formal plantings of native flowers and grasses that relate to the formal layout of square—featuring a profusely flowering butterfly garden that attracts pollinators. These perennials will change with passing seasons and, once established, will lower maintenance costs, as they do not require frequent mowing.

- Shallow rain gardens along the perimeter of the park will also be planted in a formal style and will provide both ecological and social benefits.

Social Connections

Clear sight lines maintain views to and from the park, enhancing social connections and increasing the perceived safety of the park.



The Ecological + Social Strategy: A formally planted wildflower garden with benches occupies one half of the park. The other half of the park includes the quintessential lawn with canopy trees, but it is augmented with an understory of small trees and shrubs to enhance its habitat potential and reduce runoff.

5

Reusing a Vacant Lot in the Center City

The Andrew-Riverside Temporary Park, Minneapolis, Minnesota

THE PLACE

Due to significant structural problems, the historic Andrew-Riverside Presbyterian Church was demolished. Although planning to rebuild, the congregation needed to find a temporary use for its half-acre (0.2 hectare) site for two to five years so that it would be a neighborhood amenity and not an eyesore.

This is a very typical type of center-city site—a vacant lot in a neighborhood that will most likely be redeveloped but remains temporarily vacant.

The Andrew-Riverside congregation asked the Metropolitan Design Center to develop a design concept for this site that:

- Reflected their interest in international faith communities.
- Provided space for youth programs, including an exchange program where American, Guatemalan, and Palestinian youth painted murals to be displayed on the site.
- Created a space for the entire neighborhood to enjoy.
- Required low and inexpensive maintenance.

The designs, one of which was built in 2004, explore options for enhancing the site's ecology and providing a demonstration of design strategies for inexpensive, temporary parks. Resources for the park's rebuilding came from a watershed organization that stressed using native plants, as well as from volunteer laborers. The park won a community gardening award from the state horticulture society.

THE CORE ISSUES AND TENSIONS

Ecological

- The park is several blocks from the Mississippi River, but it is cut off from it by an industrial area. Sandy soils underlying the site allow for easy infiltration of runoff, if it can be slowed down and captured. Rain gardens help infiltrate storm water and can be habitat for insects.
- The neighborhood has a mature tree canopy, but several large street trees beside the church property had to be cut down due to Dutch elm disease. The future construction made immediate replacement of

11

Management

Parks need management in multiple dimensions to protect their integrity for future generations. This sheet focused on four important theme: (1) management zones, (2) costs, (3) maintenance of habitat, and (4) ecosystem management.

MANAGEMENT ZONES

One of the major concerns for park designers, planners, and managers is how intensely parks are used and by whom and if this use is causing any unusual patterns of wear and tear or potential safety concerns. A small park may have just one management zone. For example, a square in a densely populated central neighborhood probably only has cultivated landscapes.

COST

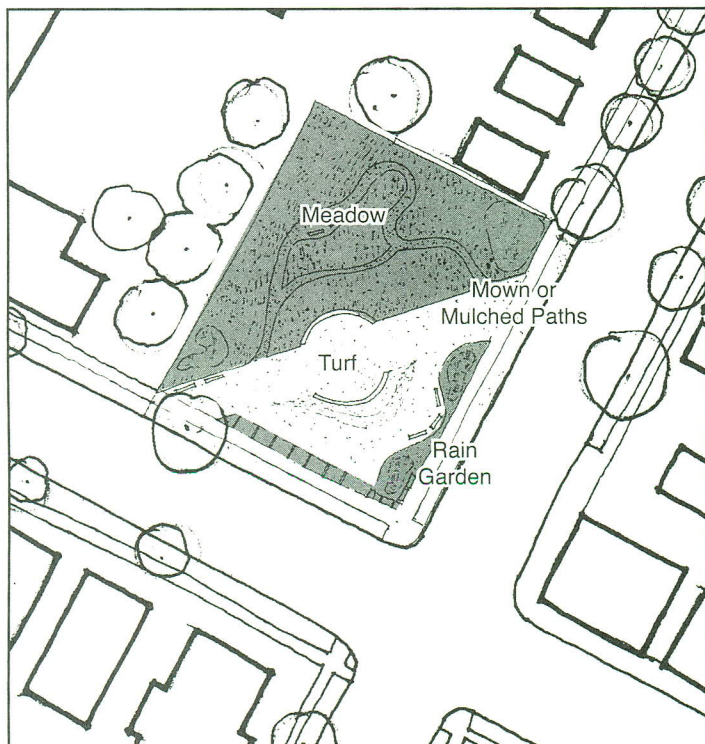
The size of small parks may well result in more intensive use over time on a per acre (hectare) basis and thus more expensive maintenance. Managing some of the park area for native landscaping potentially reduces costs, counterbalancing the size premium. In addition, small parks may have fewer wasted areas and more people using each acre, meaning that per capita costs may be lower than larger, less intensively used parks.

MAINTENANCE FOR HABITAT

Typical management activities in small parks include mowing turf and clipping shrubs. It is important to

note that clipping shrubs into an unnatural shape, such as balls, often stimulates the shrubs to create a low, dense, twiggy, leafy canopy. People can see over these low shrubs, but much is sacrificed in terms of aesthetics and ecology. From a preference standpoint, people like tall shrubs as long as the canopy is open and allows prospects to the surrounding landscape while minimizing concealment for criminals. From an ecological standpoint, allowing shrubs to achieve their natural habit of growth would likely improve habitat, because there would be more opportunities for better cover for a wider range of species as well as more flowers and fruits for food sources. People would also appreciate the greater range of seasonal interest, because plants are allowed to bloom and fruit. Plants that are too messy in terms of flowers and fruits may cause a maintenance issue on hard surfaces.

Management of small parks can influence the diversity and complexity of the park's ecology. For example, their small size limits the number of wildlife species to generalist and edge species, but management for these species can provide more suitable habitat.



From Design Example 5, pages 128–133

Including areas of lower maintenance (shown as gray shading) plantings, such as native prairie plantings, can help reduce maintenance costs. The rain gardens and paths could be maintained by a neighborhood group.

ECOLOGICALLY-BASED MANAGEMENT APPROACHES

In the last decade, the management of regional open space has integrated ecologically-based principles of land management. One of the major problems that ecosystem management addresses is the causes, effects, and potential mitigation strategies for landscape fragmentation.

Key considerations with regard to management of parks include the following:

- Cultivated small parks are expensive to maintain, so managing some of the park in a wilder state or with lower maintenance-planting designs should be considered.
- With existing plantings, selectively prune to allow trees and shrubs to achieve their natural habit of growth. This will likely be a more

open shape than that achieved through trimming. Care must be taken that good sightlines are maintained and that shrubs and tree limbs are not perceived as a danger.

- Manage for the long-term care of trees. Provide adequate soil and nutrients.

- Survey existing conditions carefully to target maintenance on key problems.
- Follow ecologically-based, land-use management principles and guidelines created by major organizations such as the Ecological Society of America (ESA).

Information in this design sheet is taken from **DESIGNING SMALL PARKS: A Manual for Addressing Social and Ecological Concerns** (New York: John Wiley & Sons, 2005).

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Social and ecological guidelines for designing and maintaining small parks

Designing Small Parks: A Manual for Addressing Social and Ecological Concerns draws on a wide range of knowledge to provide a one-stop reference to building better parks.

Integrating design criteria with current social and natural science research, *Designing Small Parks* presents landscape architects, park designers, park departments, planners, scientists, and civic groups with a broad palette of design options. Beginning with an overview of key issues and terms, this accessible manual is arranged around twelve topics that represent key questions, contradictions, and tensions in the design of small parks.

Designing Small Parks features:

- Concise guidelines providing immediate access to critical information
- Fundamental material on size, edges, appearance, and naturalness
- Ecological and human environment coverage of water, plants, wildlife, and air and climate
- Succinct summaries of issues surrounding clients and other involved parties
- Over 100 drawings and photographs illustrating design details
- Up-to-date scientific research
- Five conceptual design examples that offer hands-on applications of covered material

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