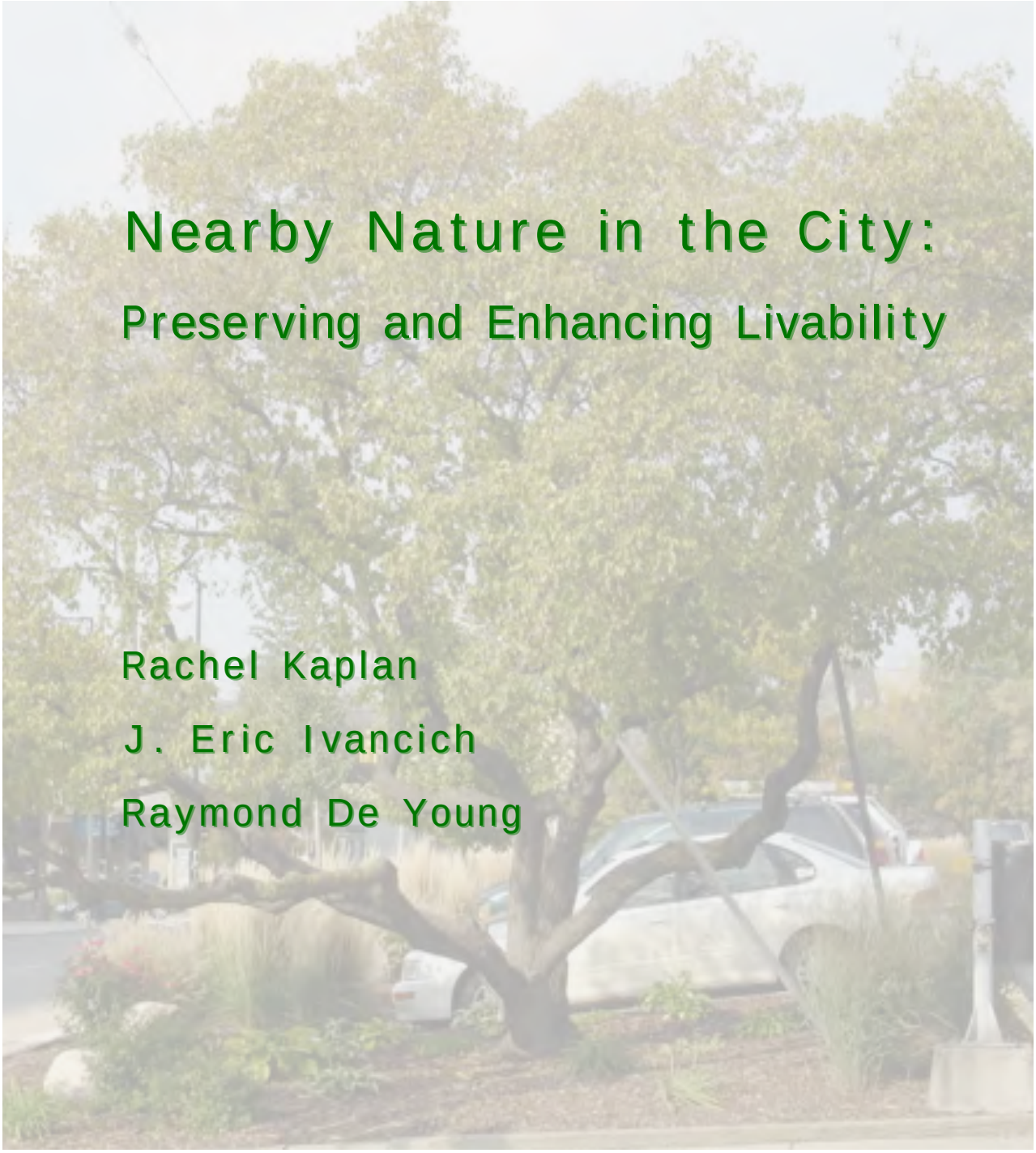

Nearby Nature in the City:

Preserving and Enhancing Livability

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Acknowledgements

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Photo credits: Robert Grese – p. 9, upper right; p. 10, bottom; p. 20; p. 21. Riverside Project Team - p. 18, top left and bottom right. All other photographs were taken by J. Eric Ivancich.

About the authors

Each of us has ties to the University of Michigan where Rachel Kaplan and Raymond De Young are on the faculty in the School of Natural Resources and Environment. Rachel (in collaboration with Stephen Kaplan) is widely known for work on the importance of the nearby natural environment to human well-being. Most recently, with R. L. Ryan, they co-authored *With People in Mind: Design and Management of Everyday Nature* (Island Press). J. Eric Ivancich, with a UM doctorate in computer science and engineering, was not only the project's chief photographer, but a major contributor to the text as well.

An invitation

We consider this a part of a much bigger effort to preserve and enhance the livability of cities, big and small, by incorporating more nature. Many examples are provided in these pages. We invite you to think of other ways, places, and contexts. And we invite you to share these with others who would benefit from a collection of ideas and examples. We have set up a website for this purpose at sitemaker.umich.edu/urban.nature

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Preface

Cities are often described as vibrant and exciting, fast paced and bustling. Yet cities also have tranquil places. Where might such places be? Perhaps beneath the canopy of a large tree, a vest pocket park, a colorful garden, or along a riverside trail.

More than likely, such respites are nature places. They are unlikely to be nature on a grand scale; to some they may not even qualify as "nature." Far from being untouched by humans, urban nature is at the mercy of people. But at the same time, people are at the mercy of such nature. Nature plays a vital role in their lives – as indicated by volumes of poetry and by what is by now a substantial body of research. People are often passionate even about small bits of nature they find nearby. They nurture it, defend it, and mourn its loss.

This document grew out of concern for such loss. Rather than mourn that nature is losing ground to infill, why not plan for having nature nearby while also planning for increasing urban density? It should not be an afterthought; we need nature too much to permit that.

We use the term nature very broadly throughout this document. While "nature" is often referred to as "green," its color varies with season and plants. And while sometimes referred to as "open space," nature places can be enclosed. Our use of "nature" refers to vegetation of all kinds; but it also includes the spaces that are created by it and the opportunities the natural elements foster.

Our focus is on the ways in which nature is experienced and the psychological and social benefits that come from seeing it, being in it, and exploring it. At the same time, nature bestows many other benefits as well – improving air quality, reducing storm water runoff, cooling the city, providing nesting habitats. These are no less important, but not the subject of this document.

Although the development pressures in Ann Arbor inspired our project, we believe the outcome is applicable to communities on many scales, from small towns to the big cities. The nature opportunities we offer are designed to be flexible and appropriate to a broad set of urban contexts. They can be taken individually or combined in many ways. They can also serve as inspiration for opportunities that fit local contexts we have not even imagined. We hope the same organic process which led to this work leads to the creation of many nature places, and that these nature places contribute to the life of the city and its people.

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University of Michigan

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Part I Tree Towns in the Age of Density

As is true of many cities, Ann Arbor has a long and intimate relationship with nature. The city's founders celebrated the greenness of the area with the name they gave to their 1824 settlement. Over the years, Ann Arbor has dedicated over 2000 acres spread among more than 140 individual parks. And the residents are proud to refer to their home as *Tree Town*.

This connection to nature is part of the reason that Ann Arbor has been a vibrant city and constant source of attraction to new residents and businesses. As cities make efforts to accommodate growth, it is important not to lose sight of the ways that nature has been an integral part of what can make them so appealing.

A Density Predicament

Ann Arbor is a successful city. It regularly appears on lists of the best places to live in the United States. Former and current residents speak fondly of the city; many of them sound like they could be members of the visitors and conventions bureau. The city attracts well-educated people to local jobs in what are considered desirable industries. Its size and scale are among its many attractions, not to mention all that goes with being a Tree Town.

Success, however, can have a down side. The very attractions that make cities desirable can translate into pressures for growth. And growth can all too easily undermine the very advantages that people seek. The demand for growth realizes itself in two distinct directions. One of these is outwards, leading to the threat of sprawl to the surrounding farmland and natural areas.

Another way to absorb the demands of growth is inwardly, within the city, and that expresses itself in terms of increased density. Although the inherent trade-off between density and open space is obvious, the threat that density poses to the nature within the city may be less apparent.

With the pressure to increase density comes the desire – for developers as well as planners – to maximize the use of every square foot of land. From such a perspective open areas are considered "unused" land. "Unused" translates to "available for use," and "use" generally means development. Unfortunately, new buildings seem to grow faster than hindsight about the ramifications of the changes. This pattern has been repeated many times and in many places, yet it typically goes unrecognized because of the incremental character of the change.

Our intention is not to argue against density, but to suggest ways to reduce the regret that hindsight can bring. Vibrant, livable, urban places can be compact and green. Density need not preclude open spaces, and nature settings can be located in many spaces that need not compete with development. For this to occur, however, requires planning and commitment. These, in turn, are more likely if we understand how vital the nearby natural environment is to a city's success.

Urban nature is not just an amenity; it is essential

The fondness for trees is deep-rooted. The joy that flowers bring is pervasive. Fondness and joy for whom? There is reason to think the answer includes people across a wide spectrum of human characteristics: old-timers as well as newcomers; the urbane and the unsophisticated; the rich, the poor, and all those in between; the older and the younger; birth origin, birth order; skin color, care-giving or care-seeking – it seems we are all in this together. The natural environment is fundamental to people's well-being.

There are many studies that support these claims. While people do not have identical preferences for flowers or trees, and preferences can vary depending on the purpose and context, the research shows people's resonance to the natural environment is deep as well as widespread and the benefits provided by having nature nearby are far-reaching. For example, the presence of a few trees in low-income residential areas has been shown to reduce violence and aggression, have positive impacts on neighborliness and civility, and to help children take control of their lives.

We should emphasize that our focus is on nature that is nearby. While having many advantages greenbelts surrounding a city and other large scale nature cannot substitute for the benefits that are derived from the view of nature from the window, the ability to step outside and see a tree, or from taking a lunchtime walk in a setting that includes vegetation. The vast majority of the research on the benefits of nature for human well-being has focused on environments that are nearby, often just a glance or a few steps away.

Such findings make it clear that having nature nearby is far more than an amenity. We cannot think of it as an added pleasantness, an attractive quality for those who can afford it. The psychological and social benefits of nearby nature are pervasive. Each of us benefits individually and communally from living in a setting that enhances considerateness and well-being. The contribution of nature to our health demands that we all have frequent and ready access to it. Tree towns are about beauty – and much more.

But space is precious. What can be done?

The puzzle then is how to have ready access to nature within the city when every square foot of land is prized. One way is through acquisition of land. The fact that such efforts generally are voted on favorably acknowledges the importance citizens place on nearby open space. Such purchases frequently involve larger land parcels or corridors (e.g., greenways, river walks). Like existing parks, these are vital community resources that play major roles in the city's success.

The purpose of the next section – the heart of this document – is to suggest many other opportunities for incorporating bits of nearby nature. Some of these are public areas and some private. Some entail unusual circumstances that the shape of a property might afford. Some are occasions that present themselves frequently and readily. Although many of the examples entail small spaces, it is not the size or scale that is the main concern.

We have organized these nature opportunities in terms of three broad categories: nature at an edge, as a link or space, and nature that is not at ground level. The specific themes presented for each category focus attention on a set of issues that help explain the placement possibilities and the benefits that the nature offers. These themes can be thought of as flexible patterns that can be combined in many ways and different contexts. Singly or in combination they offer many simple ways to incorporate nature in the urban context. Collectively they can make a substantial qualitative difference.

The final section of the document addresses how to make "it" happen – how to increase the likelihood that nature is enhanced and preserved within the city. Incorporating nature inevitably raises considerations about keeping the plants healthy and maintained as well as issues of safety. But to be sure that there are plants to maintain requires a prior commitment to devoting precious land to them. Thus having nature in the city is necessarily a joint venture both in the commitment it calls for and in the benefits that it provides.

Part II Opportunities for Urban Nature

Nature at an Edge

Consider a typical trip to downtown. We arrive by car, navigate from the parking area to a sidewalk, and from there walk to our destination – a residence, place of work, or business. It may be a short journey, but it includes quite a variety of distinct spaces and experiences.

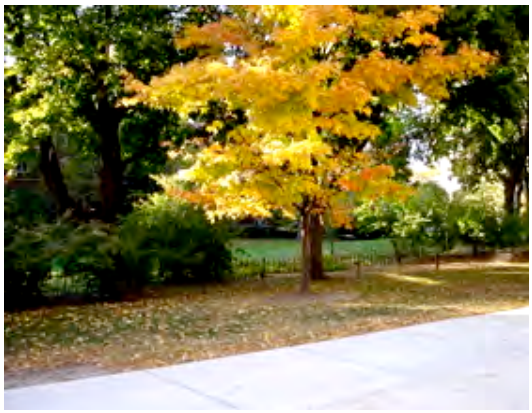
In fact, a city can be viewed as a mosaic of spaces. There is public and nonpublic space, space used for movement and space used for waiting, space for people and for vehicles, and space shared by the two. People need to navigate through this mosaic safely and with a minimum of confusion.

Understanding these spaces and their relationships is made easier by using edges between them as signals of transition. Edges can be defined or highlighted by using anything from a towering wall to a simple line painted on the ground. Nature can also be used to define the edges between spaces, while at the same time providing other, highly valued benefits.

Nature as Partition

Nature can be used to mark borders where a wall or fence might otherwise be used.

Small gardens, lawns, or other courtyard-like areas are often intended as private spaces. A partition, such as a wall or fence, may be used to signal that these spaces are not intended for the public. Natural partitions, such as hedges or groups of trees or shrubs, offer an alternative that can provide additional benefits to the people on the public as well as nonpublic side.



Like a fence, nature can enclose a space, while also allowing one to look in.

In fact, nature provides a range of options depending on its size and density. A little nature can simply define the border between the spaces. Slightly more substantial nature could act as a semi-permeable barrier discouraging people from moving across the border. If the nature is more dense still, it can act as a barrier and buffer, filtering out some of the urban sights, sounds, and smells for those on the nonpublic side. Such a buffer can provide both a respite and some privacy for those on the nonpublic side and some beauty for those on the public side.

Well-spaced trees with high branches and some low foliage create a pleasant partition between spaces with different functions.

Even nature of an intermediate height, as long as it's spaced out, makes a nice partition without hiding places.

A hedge can soften a fence, and a fence assures pedestrians that no one can emerge unexpectedly .

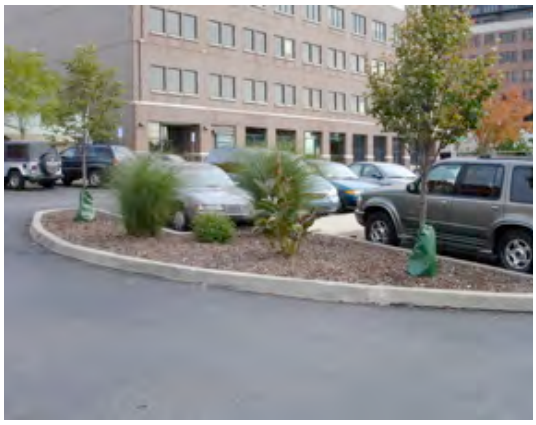
Guide Movement with Nature

Nature that is tall or in raised planters can be used to guide the movement of cars and pedestrians.

Spaces such as sidewalks and parking lots are intended for movement. And movement can create issues of safety and congestion. Vehicles must avoid other vehicles and, of course, people. Pedestrians need to negotiate where vehicles might interfere as well as navigate around those who might be waiting rather than walking. Nature can be used to gently guide and coordinate movement, making everyone more predictable.

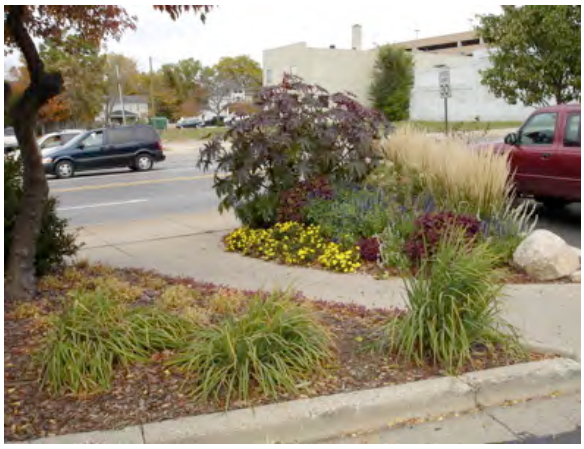
Where the parking lot meets the sidewalk, nature of modest height can be a barrier, keeping cars and pedestrians separate.

A short wall or fence can also perform this function, but the addition of some nature provides an interesting visual focus.



Within a parking lot, raised areas can define the ends of parking aisles, marking driving lanes. Using nature in this way is more visible than lines painted on the ground. These features can increase both clarity and safety of all who use the space.

A nature corridor can separate a sidewalk from moving vehicles.



Nature surrounding a raised sidewalk leads pedestrians from a parking lot to a sidewalk.

Nature can mark a change in levels, making a railing unnecessary.

Nature at the Entrance

Nature at an entrance promotes physical and mental adjustments.

Moving between outside and inside is a transition people make many times in a day. It is a transition between warmer and colder, between being sheltered and exposed. But the change is not only in the environment; there is also a mental transition. A person is moving between the more private and the more public, between being known and being somewhat anonymous. At such transitions, people may want to adjust their clothing or finish a phone call. Their gait may change, as well as the volume of their voice. They may plan a route, or just collect their thoughts.

Such physical and mental adjustments are more easily carried out if there is a transitional space between the confines of the interior and the movement of the sidewalk. And this transitional space can incorporate nature to provide a brief respite, to protect people from the elements, or simply to signal the transition. If this nature is well-maintained, it can convey a sense that the building is cared for and, by association, its visitors also.

The trees at an entrance can give people a bit of a reprieve as they open or close their umbrellas.

The awning here is more distinctive than the plantings. Nonetheless they too help to mark the entrance, and a sense of caring.

Even though they are of the same species and age, the trees show some differences. With further variation in wind, water and care, their distinct look will help people to find the right door more easily.

Although a typical use of an entrance is at the interface between inside and outside, there are numerous examples where the transition exists between distinct exterior spaces.

For example, one can enter a parking lot from the sidewalk.

One may also enter a seating area or courtyard

Such situations are helped by clear signals of transition both as cautions – such as potential moving vehicles – and cues for different cognitive and social demands.

Nature can lead the eye to a building entrance.

Nature Corner

Corners provide a nature opportunity in a highly visible space.

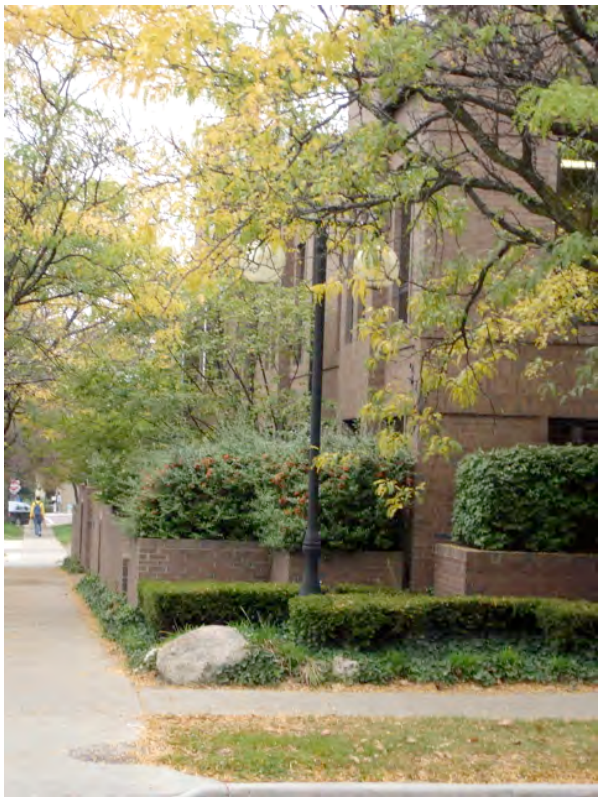
The spaces within intersecting sidewalks at the street corner provide many opportunities for nature. While corners impose many constraints on traffic flow, they nonetheless can provide settings for nature that is visible from a wide area.

Although corners within parking lots cannot be used for vehicles, they are ideal spots for a tree.

The corner allows one to create a space for nature in a variety of shapes, many that have depth. By virtue of being on a corner, the space can be seen from many points along both streets and sidewalks. And because pedestrians tend to slow down if not stop altogether at street corners, nature here is more likely to be visually explored and appreciated.

The corner plantings can also provide a buffer between the sidewalk and adjacent buildings, making the area more appealing.

Nature can soften the corners of buildings.



Nature Links and Spaces

Even small spaces, or nothing more than a well-placed bench, can foster a peaceful moment or occasion for conversation. Such spaces greatly benefit from including nature. The city also includes many longer stretches where trees and plantings can enhance the pedestrian's experience.

Nature Benches

The placement of a bench, and its relationship to nature, can provide a pleasant place for waiting, resting or conversing.

An occasional place to sit is welcome, for many people. It can be more than welcome, even a necessity, for someone whose arms are full, who is weary, or has a long wait for a bus or a rendezvous. The urban environment can accommodate such a need by providing benches.

Even a short wall with a wide, smooth top can serve as a bench of sorts.

But all benches are not equally friendly. A bench that sits by itself at the curb is barely suitable for many needs. With vehicles going by on one side and pedestrians on the other, the sitter is likely to feel exposed and the noise may make conversation difficult.

Better alternatives incorporate nature into the placement of the bench. A bench can be situated so it backs onto nature or sits within a small patch of nature. Such a bench would allow its users to feel safer, be less exposed to sun and weather, and better able to converse. Alternatively, a bench can be situated so it looks onto nature, nearby or distant, providing a visual respite that would allow the sitter's mind to wander.

The arrangement of two or more benches can make a big difference in their use. Various types of socializing can be aided by the space between benches and their orientation to one another.

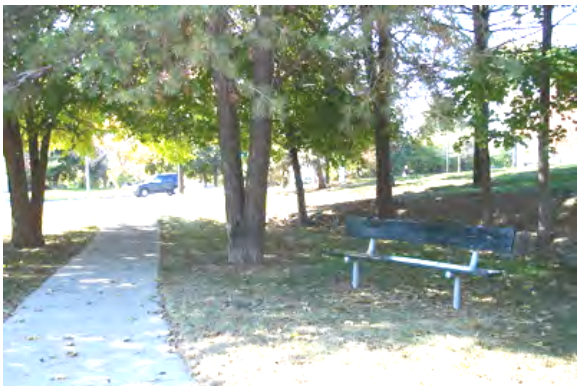
Two people may prefer a bench that is set apart from others.

A small group can interact if there are a few benches either facing each other or placed at an angle to one another.

Flowers can discourage people from walking on the grass.

Though along a busy sidewalk, this bench offers a place for a respite.

Nature and benches can work well in spaces that otherwise are non-functional.



Benches set only a short distance from a busy street can nonetheless give pedestrians a place to rest or wait for a bus.

Courtyard

A courtyard enhanced by nature brings people together.

Some urban activities require time away from the buzz and movement of the sidewalk and street. Extended conversations, eating lunch, meeting up with others, or a break away from the computer screen all benefit from spaces set apart. Because the design of the space is so important to these purposes, people are willing to walk a ways to get to a suitable space.

A courtyard accommodates many of these purposes, especially if it provides a variety of seating both with and without tables. Nature within the courtyard makes it even more suitable by providing visual interest and respite and reducing visual distractions that might otherwise be a problem in a space defined by hard surfaces.

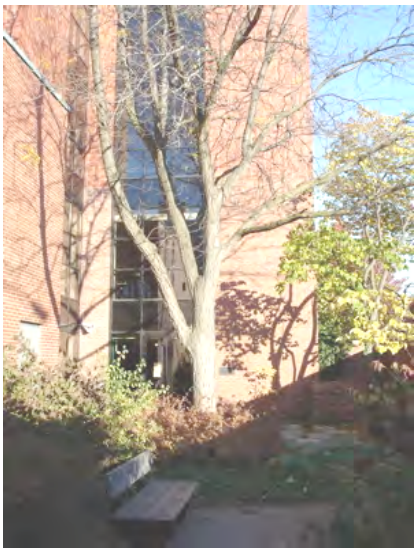
A courtyard in a commercial complex can provide a variety of spaces. The attention to textures and plantings makes it a pleasant space to pass through or enjoy for a bit longer.

A small garden courtyard is separated from the street by a wall.

A courtyard's role in bringing people together can lead to other benefits such as a vibrant atmosphere and increased mutual safety.

Even a courtyard within an apartment complex, and intended for its residents, can afford passersby a nature opportunity.

People can "get away" and collect their thoughts at this meditation courtyard.



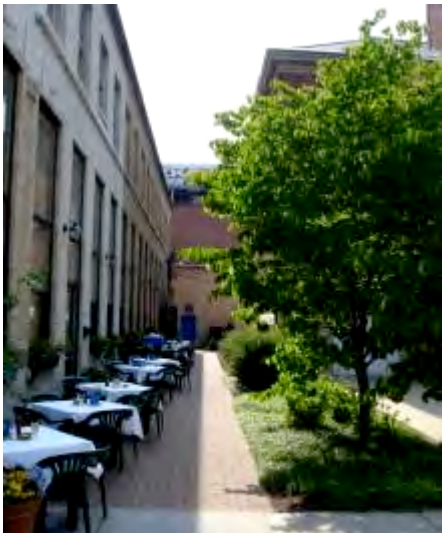
Library patrons can read outside when it's warm. And people passing by the same area can explore nature just feet away from a busy sidewalk.

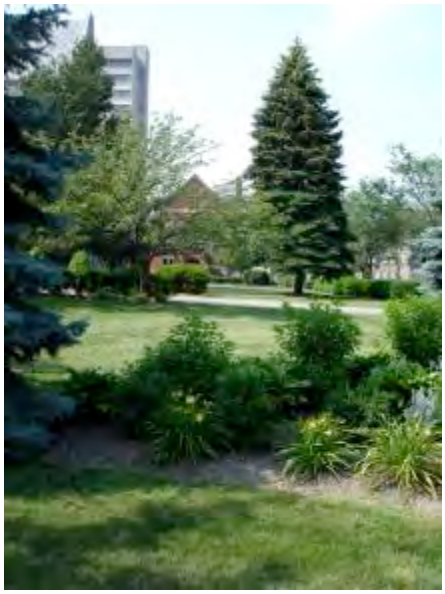
Urban Oasis

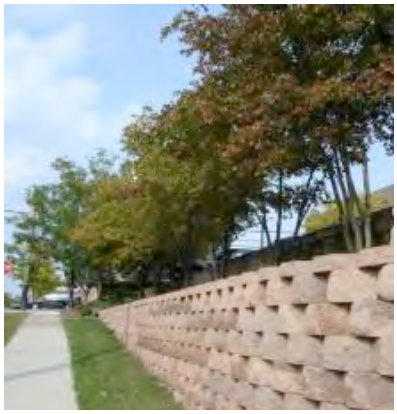
Intense areas of urban nature
allow people to "get away" and explore.

The urban environment benefits from areas of intense nature. These areas come in a variety of forms and sizes, from small gardens to vest pocket parks. Through their intensity urban oases provide opportunities to "get away," contemplate, and explore, all without having to go far or be gone for long.

Many of these special spaces are public, allowing people to walk through and be enveloped by nature. In other cases, people may be able to enjoy private nature places as they pass by them. A peek through a gate or over a low wall can afford a view and a moment of enjoyment. Even a high wall may not obstruct the pleasure of seeing nature that spills over, providing a hint of an oasis hidden from view.







This church provides a little garden that seems far away, yet is just off the sidewalk.

Some churches have small gardens or special nature places that serve as an oasis, either physically or visually.

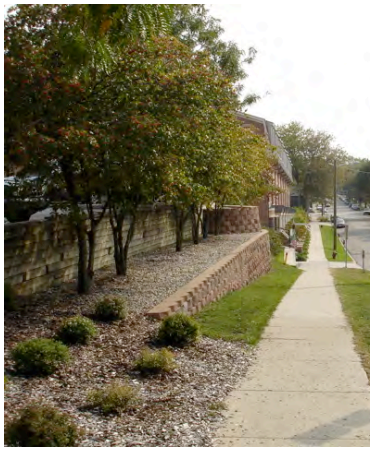
Another church provides a beautiful park-like space that buffers the building from the street and sidewalk.

Nature Corridor

Nature stretched out enables travel and exercise along a visually rich, relatively quiet and calm environment.

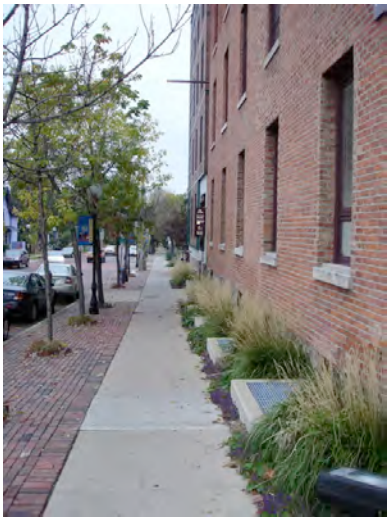
People need to move. They need to exercise to retain or regain health. And they need to get around a city, sometimes on the order of a mile or two. Linear nature supports these needs by allowing easy travel, leisurely walks, vigorous running, and biking. And because a nature corridor is often separated from or runs parallel to roads, it tends to keep people separate from vehicular traffic. This may allow them to relax and reduce their vigilance.

A nature corridor can provide pleasant scenery that slowly changes as one moves along. It can buffer urban sounds, making conversation easier and providing a deeper sense of being away.



Nature can be along both sides of a path or just dominate one side embracing the urban scenery.

A corridor can have many forms, from the more pristine, such as greenways, urban trails, and river paths, to the more urban streetscapes. It can be wide or narrow, paved or unpaved, near or far from traffic.



Even a small amount of nature can create a corridor.

A path along a river allows people to get away from urban commotion.

Elevated Nature

The urban environment, as it gains more density, grows vertically. Nature is not limited to the street level; it can be incorporated atop buildings, or on balconies. Nature can also be featured below street level, for example as small sunken seating areas. Looking up to see nature above, or down to see it below, can provide surprise and reward exploration

.

Window Boxes

A window box can serve as a miniature garden, providing additional opportunities to experience nature for passersby as well as those inside.

Pedestrians visually explore their environment as they move through it. Window boxes, with their textures and colors, provide high-impact nature on a small scale. For the people inside, this view of nature allows for frequent respites, occasional breaks to tend to the plants, and a bit of a buffer from the outside world.

Depending on the design, a window box may change seasonally, providing another dimension of interest both for those inside and out. The small scale of the window box eases its maintenance, and allows for the nature to be altered between years or seasons.

A window box can be the source of great enjoyment both as seen from inside and from the street level.

Roof Gardens and Balconies

Balconies and roof gardens offer benefits not only to occupants but also for those who can appreciate them from nearby windows and buildings.

Having the use of a balcony or roof garden is a highly valued feature available to relatively few urban dwellers. But this urban nature can be designed to benefit a great many others. The view out the window has dramatic effects in the personal or working lives of people. Well-placed roof gardens, green roofs, and balconies might be visible to hundreds if not thousands of windows depending on the scale of the nearby urban environment Once benefiting only those who live in penthouses, they have become far more common, and highly treasured, in commercial buildings as well as hotels.

These Chicago rooftop gardens provide welcome views for many people who work or live in the adjacent buildings. They even provide opportunities for walking in the gardens.

Vertical Nature

Plants add vibrancy and fascination in many surprising places, some not even horizontal.

Ivy covering a building façade can give a sense for the vertical dimension of a building. Discovering some flowers flowing down from a planter on a balcony or porch is a pleasant surprise.

Lamp posts with planters can draw attention to one's surroundings enriching the experience of an urban walk.

These vertical gardens offer a striking contrast to a brick wall.

Opportunities and Purposes

There are many opportunities for incorporating nature in the city. In the previous section we presented these in terms of separate themes. Each of these can help to make the city more vibrant, interesting, and pleasurable. In addition, the opportunities for integrating nature into the urban environment support many other purposes as well. This table shows the relationship between some of these purposes or functions and the opportunities presented in the previous section.

	Exploring	Walking	Respite	Social	Privacy	Weather Protection
Partition	✓[v]				✓	✓
Guide Movement		✓				
Entrance			✓			✓
Corner	✓[v]					
Bench	✓[v]		✓	✓		✓
Courtyard	✓[v]		✓	✓	✓	✓
Oasis	✓	✓	✓			
Corridor	✓	✓		✓		
Window boxes	✓[v]					
Rooftop / Balcony	✓[v]		✓			
Vertical nature	✓[v]					

[v] In these instances, the exploration may be visual rather than physical

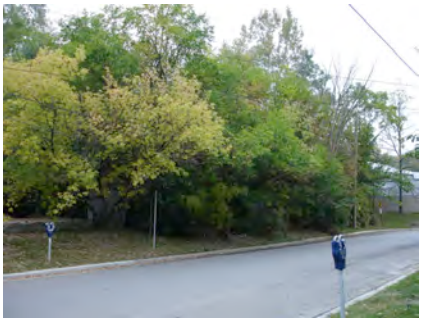
While we have presented these opportunities separately, many of them are likely to be combined. A bench, for example, can be placed along a linear path or in an oasis. The opportunity for nature can guide movement can be useful along a corridor as well as in entryways. In the process of combining the opportunities, additional purposes can be supported.

Some design considerations

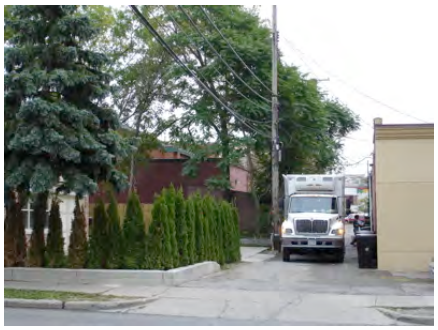
Living things require care. Incorporating nature into a vibrant urban environment requires attention to some issues that can make the difference between nature that "works" and nature that detracts. While these issues are not major obstacles, they are important to address, both in the initial phases of a project as well as throughout the life of the plants. That may sound like a costly proposition, but it need not be. Actually, the costs of addressing the issues pale in comparison to the significant benefits nature offers the community. And when addressed through partnerships many benefits accrue not only to the setting, but to all who participate in the venture.

Safety

In addition to its many positive attributes, nature can also have negative impacts on safety. This is particularly true if the foliage hides what needs to be seen. For example, drivers need to be able to see pedestrians and other cars at street corners and within parking lots. Dense foliage can also induce safety concerns by creating places where someone may hide. A walk can become much less enjoyable when vigilance becomes a focus. In addition, a dense tree canopy can diminish safety by blocking light. A darkened area can contribute to the perception of danger, even if the lack of light and interplay of shadows are only temporary. Avoiding these various problems requires somewhat different approaches, but the solutions all require attention to the design, placement, and care of the natural features.



Density may prove a problem since someone could easily hide behind hedges. It is easy to imagine that pedestrians would feel uncomfortable here, especially during twilight and evening hours.



Hedges can create a partition for a yard, but may be too dense for the comfort of many.

Here are some ways to create safe settings that offer nature:

- *Except for trees, generally keeping the nature lower than three feet.*
- *Having narrow columns of nature with generous spaces between them.*
- *Putting an easily seen fence along the nature to create an impenetrable barrier.*
- *Thinning out the lower branches to permit visual access.*
- *Periodic thinning of dense canopies to permit light to penetrate.*
- *As with other urban areas, artificial light may be needed to increase safety.*

It's important to add here that these are meant as guidelines, not strict rules. Intended as a starting point, they would benefit from experts' input to be sure that not only year-round safety but other wide-ranging goals are incorporated.

Not only is it important to make people safe, it is also important that they feel safe. Concern about danger can lead to avoiding an area, which in turn can lead to the area being more isolated, and therefore less safe. In this way perception of a lack of safety can be a self-fulfilling prophecy.

The lower heights of the plantings and the widely-spaced trees help create a sense of a safe environment. Furthermore, the choice of plants has direct implications for maintenance requirements.

Maintenance with forethought

If one takes seriously the many benefits that nature provides to the urban setting then landscaping cannot be treated as an afterthought. Maintaining healthy nature is vital not only to the plants, but also to their contribution to the place they help create. The maintenance, in turn, is strongly influenced by decisions that are made before the plants are put into the soil.

The choice of plants affects later requirements for watering, trimming, and cleanup. Attention to soil preparation and drainage affects the health of the plants. In other words, creating nature opportunities calls for design and planting knowledge.

Even with expert selection and attention to planting, maintenance is generally required. Plants may require watering and trimming. Fall leaves and winter trash may need to be removed. In addition debris that collects around plants needs to be gathered. Neglecting natural areas, or other areas for that matter, can have negative social consequences. Unkempt areas invite more of the same.

A joint venture

Without commitment to nature, buildings and pavement will take precedence. An important part of what has made our Tree Town so desirable is the commitment to have trees and open space. That commitment is indispensable. Assuring that nature continues to be abundant within the city can only happen if it is part of a shared vision and communal dedication; it needs to be a joint venture.

Commitment

This can be expressed in many ways and at many scales. Some of these take the form of citizen action and some call for developers' goodwill. At the municipal level commitment involves elected officials as well as many whose responsibilities have direct or indirect impacts on the city's green infrastructure. Nature can reduce energy costs; nature can foster a sense of community; nature can create learning opportunities. The implications for commitment go far beyond municipal divisions that have explicit responsibility for maintaining parks and natural areas.

Commitment to nature does require funding, both municipal and private. In light of the far-ranging benefits that have been documented, it may well be one of the most cost effective ways to have a livable community. The return on investment is extraordinary in terms of healthy nature and healthy people.

Incentives and other approaches

Nature can be protected and promoted using a number of policy instruments. These can directly or indirectly make nearby nature a part of the planning and development process.

Master plans, ordinances, and other forms of codification can contain explicit expressions of commitment to nature. They can be crafted to contain requirements for open space, landscaping and screening as well as protection of existing natural features.

Premiums, bonuses, and other incentives also can provide effective mechanisms for expressing a community's commitment to nature. While developers undoubtedly recognize that nature provides benefits to their clients, the translation of this recognition to reality can be further strengthened with approaches that may yield financial advantages.

Codes adopted by different cities can offer useful suggestions for mechanisms for favoring open space, both directly and through incentives. Here are a few examples of approaches to foster such commitment to nearby nature:

- Allow floor space premiums in exchange for courtyards as a pedestrian amenity
- Incorporate nature in a density bonus for affordable housing
- Allow nature in semi-public spaces
- Permit greater building height if more nature is provided at street level
- Consider roof gardens as a premium

While such mechanisms may be attractive for encouraging nature in the context of private development, they are less applicable for public spaces. Using Ann Arbor as an example, a substantial amount of urban space is devoted to educational and other institutional uses. These provide particularly important settings for incorporating nature, both because of the amount of land involved and because they are public. The space around these buildings and the spaces between them offer wonderful occasions for oases, sitting opportunities, and longer stretches where people can walk in nature.

Participation at many scales

The story is told that flower beds at bus stops are cared for while people are waiting for the bus. In many places employees look after the plants around their work place even though it is not part of their job description. Tree plantings in many cities are turned into festive neighborhood events. And citizens take responsibility for the continued care of street trees and the areas surrounding them.

The opportunities for community participation are vast. They can draw on expertise within the community as well as become occasions for children and adults to learn more about the natural world. In Ann Arbor prescribed burns have become widely accepted. Volunteers are an important part of nature stewardship in many communities. Ann Arbor's Natural Area Preservation program has benefited from many hours of citizen time devoted to restoration projects, invasive plant removal, and inventories of bird, butterflies and frogs!

Opportunities for nearby nature can also be fostered by providing residents with personal spaces where they can grow flowers, herbs, or other plants. For example, balconies, roof top gardens, and areas near entryways can be nature places for people to look after and enjoy.

Tree reforestation efforts as a consequence of the huge losses brought on by the emerald ash borer are further testimony to such nature commitment. These efforts also demonstrate the vast network of partnerships that can exist among public and private groups, and big and little non-governmental organizations (e.g., Rotary Club and Global Re-Leaf).

Adoption has become a compelling tool for participation. Adopt-a-stream has been part of the local river monitoring effort since early in the 1990's. Across the country, many other features of the nearby natural environment have also been part of such adoption programs, including: rivers, parks, trees, gardens, and even planters!

These and many other examples demonstrate people's desire to take part in their nearby natural environment. Not only does such stewardship benefit nature, it nurtures the participants as well. They meet others, learn new things, spend time outdoors, and gain a sense of ownership of the place they care for. In the process, there is an increased sense of community and greater commitment and attachment. Encouraging participation in caring for nature has many pay-offs.

The bond between nature and our cities is far too precious to take for granted.

Increased urban density need not and must not be permitted to reduce this treasure.

A city without trees may not be fit for dogs; it is certainly not fit for their owners.

We hope we have provided some useful examples for ways that nature can be preserved and enhanced even as our cities grow.