

# Social Spaces, Resilient Communities

Social Infrastructure as a Climate  
Strategy for Real Estate



Urban Land  
Institute





## About the Urban Land Institute

The Urban Land Institute is a nonprofit education and research institute supported by its members. Its mission is to shape the future of the built environment for transformative impact in

communities worldwide. Established in 1936, the Institute has more than 45,000 members worldwide representing all aspects of land use and development disciplines.

## About the ULI Urban Resilience Program

ULI's Urban Resilience program is focused on how buildings, cities, and communities can be more resilient to the impacts of climate change and other environmental vulnerabilities. The program works with ULI members to provide technical assistance, advance knowledge through research, and catalyze the adoption of transformative practices for real estate and land use policy. The Urban Resilience

program is organized within the [ULI Randall Lewis Center for Sustainability in Real Estate](#), which also oversees ULI's Greenprint Center for Building Performance and the Building Healthy Places Initiative.

ULI is grateful to The JPB Foundation for its support of this research.

Cover: Situated in the middle of the "Soul City Corridor" along Chicago Avenue and identified by the city's Invest SouthWest initiative, PopCourts is part of a larger vision to bring development to Chicago's underinvested and primarily black and brown communities. (Anezka Gocova)

© 2023 Urban Land Institute

2001 L Street, NW | Suite 200 | Washington, DC 20036-4948

All rights reserved. Reproduction or use of the whole or any part of the contents without written permission of the copyright holder is prohibited.

### **Recommended bibliographic listing:**

Williams-Eynon, August. *Social Spaces, Resilient Communities: Social Infrastructure as a Climate Strategy for Real Estate*. Washington, DC: Urban Land Institute, 2023.

# Contents

Executive Summary	4
Introduction	6
Social Infrastructure and Climate Resilience	10
The Business Case for Social Infrastructure	24
How to Create Successful Social Infrastructure	33
Social Infrastructure Examples	49
Conclusion	65
Project Team	66





# Executive Summary

Social infrastructure—or the spaces communities can use to gather and build relationships—is a core aspect of building urban resilience. Social infrastructure can reduce vulnerability to climate hazards by addressing the underlying socioeconomic stresses that exacerbate those hazards’ impact on communities.

Real estate leaders can intentionally incorporate high-quality social gathering spaces as part of a holistic strategy on climate and environmental, social, and governance (ESG) goals, alongside more commonly known physical approaches such as green infrastructure or highly energy-efficient buildings. The business case and co-benefits of social infrastructure can include enhanced asset value and marketability, increased interest from community-minded end users, improved social equity, and more stable long-term returns on investment through strengthened local economies.

This report uses research and a series of interviews with experts in the built environment—including

developers, designers, resilience planners, and public health researchers—to accomplish the following:

- Provide a brief introduction for real estate developers and owners to the concept of social infrastructure.
- Explain the connections between social infrastructure and resilience to shocks and stresses.
- Present a business case for investing in social infrastructure.
- Describe the characteristics of successful social infrastructure for developers.
- Share a selection of types of social infrastructure and relevant project profiles.

By incorporating social infrastructure, real estate developers, owners, and managers can build better long-term ESG outcomes for everyone.





# Key Takeaways

- **Social infrastructure is a critical component of resilience that real estate leaders should consider integrating into climate strategies.** Social infrastructure provides physical shelter, supports community responses to climate risks, reduces the impacts of social vulnerability and inequity, and increases overall individual and community health.
- **Social infrastructure has a strong business case for real estate investment.** The business case includes reduced downtime from climate hazards, increased marketability and asset value, smoother development processes, more stable property markets, and more.
- **Social infrastructure can be designed into multiple property types, such as multifamily, office, retail, or hospitality properties.** Building social spaces into development frequently involves intentionally dedicating new or existing space to social uses, leveraging interstitial or “in-between” spaces, and mixing uses to bring different kinds of users together.
- **Social infrastructure in real estate is most successful when it is inclusive and sustained.** Strong social infrastructure prioritizes an orientation toward social equity and access, authentic co-development with community stakeholders, and intentional attention to maintenance and programming.





# Introduction

The desire for human connection and the creation of community has always formed the core of urban life and is an essential consideration for real estate development. The search for vibrant sociality and the recognition of mutual interdependence on other people for creating culture, entertainment, and livelihood often will drive decision-making about how to shape buildings, neighborhoods, and cities.

The degree to which those decisions support successful social interactions can determine the long-term ability of a place to withstand stresses (chronic problems such as racial discrimination or chronic higher temperatures) and shocks (sudden catastrophes such as a pandemic or hurricane).

Although adapting to the shocks of climate change often brings to mind investment in built or natural infrastructure such as seawalls or living shorelines, pairing that investment with spaces that foster social cohesion and community well-being to minimize stresses can magnify the benefits. Particularly in an era of social and political polarization, prioritizing spaces for people to connect across lines of difference is ever more important and can be bolstered by the real estate industry through creation of social infrastructure.

Building resilience through social infrastructure offers a significant opportunity that private real estate increasingly recognizes and capitalizes on. That opportunity is the chance to build stronger communities socially, ecologically, and financially, which deliver better long-term returns and meet rising expectations for places that preserve or regenerate community life, respond to accelerating climate change, and enhance urban livability.

Leading real estate companies have already integrated such priorities into their core business, setting an example for the industry to follow.

This resource will introduce private developers to the intersection of social connections and climate resilience, explore the business case for incorporating social spaces in private real estate development, and present profiles of successful social infrastructure.

**“You often have government-driven, top-down investments made that may be more focused on asset protection when it comes to flooding. Social infrastructure is more often bottom up and community driven. These are two streams coming from separate directions but working toward the same goal.”**

—Jill Dixon, senior planner, Agency Landscape + Planning

**Although adapting to the shocks of climate change often brings to mind investment in built or natural infrastructure such as seawalls or living shorelines, pairing that investment with spaces that foster social cohesion and community well-being to minimize stresses can magnify the benefits.**



# What Is Social Infrastructure?

In this report, *social infrastructure* refers to the definition popularized by urban sociologist [Eric Klinenberg](#) as “the physical places that allow bonds to develop.”

Broadly considered, social infrastructure can include any physical space that supports social interaction and builds community, and it often includes places such as parks, libraries, playgrounds, plazas, courtyards, community gardens, or commercial establishments as well as “third places” such as coffee shops, restaurants, barber shops, and hair salons—thus, anywhere people gather to spend time together. These spaces become defining features of community life and have far-reaching social, economic, and environmental benefits.

Research supports the notion that the built environment is a powerful moderator of social interactions. For example, [studies indicate](#) that “social networks with the most potential for resiliency are rooted in the built environment, with the nature, strength, and quantity of social ties influenced by development patterns,” such as land use and design of public spaces.

Long embraced by advocates of the new urbanism design and planning movement, built environment and public health studies suggest that [mixed-use, walkable](#) environments, [green spaces](#), and a density of amenities and destinations can promote interactions between neighbors, as well as a sense of trust, safety, and community—all of which are essential to reducing the impacts of shocks and stresses.



For more about the role of third places in development, see ULI’s report [\*Together: Strategies for Promoting Health and Community in Privately Owned Third Places\*](#).

“Studies show that locating developments next to well-designed public spaces [has] positive economic benefits for businesses, residents, and the community as a whole. Evidence has been mounting that people, young and old, want to live and work in walkable communities—places that offer safe, ample, and interesting urban spaces to shop, eat, exercise, socialize, or simply spend time in.”

—J.T. Theeuwes, design director, Gensler

“[Why Investing in Public Space Matters for Cities and Real Estate Developers](#),” [www.gensler.com/blog](http://www.gensler.com/blog), February 2, 2021.



# What Constitutes “Social Infrastructure”?

## What does *social infrastructure* include?

Social infrastructure can refer to a variety of spaces. The categories shown exemplify a range of possible types of social infrastructure, which often overlap. Although not an exhaustive list, this resource focuses on the spaces or versions of spaces that real estate can foster.

*Click on each type to jump to its specific section within this report.*

Type of Social Infrastructure	Description	Examples
<a href="#">Commercial establishments or third places</a>	Social spaces that involve commercial transactions. Payment might be required for entrance or to buy goods or services in the space.	Markets, shops, laundromats, cafés, bars, barbershops, hair salons, nail bars, restaurants, hardware stores, street vendors
<a href="#">Green spaces and recreational areas</a>	Places or facilities that are designed to facilitate leisure activities. They can be developed by the private or public sector and can be open or closed to the public.	Large parks or natural areas, playgrounds, sports fields or courts, swimming pools, skate parks
<a href="#">Interstitial spaces</a>	Open areas between or within buildings that become gathering points. They may be freely available to tenants, occupants, or the public and may have potential restrictions on use (e.g., hours, permitted activities). They may also be green spaces.	Lobbies, atriums, plazas, small parks, terraces, courtyards, arcades, seating areas, hallways
<a href="#">Transit areas</a>	Spaces and infrastructures that involve mobility.	Sidewalks, streetscapes, walking trails (Not addressed in this report are public transit spaces such as bus stops, subways, trams, etc.)
<a href="#">Community support or development facilities* and resilience hubs</a>	Spaces that provide essential programs and services that help communities thrive socially and economically. Some, like resilience hubs, can also provide physical shelter during emergencies.	Health care facilities, child care facilities, job or employment centers, nonprofit offices, resilience hubs

Other examples not addressed in this report:

Public institutions	Places or facilities that are provided publicly at no or low cost and that are intended for public use.	Libraries, museums, art galleries, universities, schools, memorials, squares
Religious institutions	Places of worship.	Churches, church halls, mosques, synagogues, gurdwaras, temples, stupas

Source: Adapted from [Latham & Layton, “Social Infrastructure and the Public Life of Cities: Studying Urban Sociality and Public Spaces,” \*Geography Compass\*, 2019.](#)

\*This category of social infrastructure is often defined as distinct from the other categories listed, which are based on Eric Klinenberg’s “physical places that allow bonds to develop.” However, community support and development facilities are often described as “social infrastructure” in connection with essential social services. Their inclusion in this report focuses on how real estate can provide physical space for some of these uses.



# Why Should Real Estate Be Involved?

Real estate is already deeply involved in the creation of social infrastructure. Parks, plazas, cafés, restaurants, and streetscapes—as well as the creation of high-quality public realms and socially oriented spaces—are frequently used to add value to development.

At a more fundamental level, however, the success of a real estate development or a building depends on the success of its wider community, especially in the context of climate change. Even a resilient building cannot create value if its surroundings lose vibrancy and the sense of place or community identity that underpins its ability to attract people. Developers, investors, managers, and owners therefore have a critical interest and influence on whether their markets thrive despite climate and other hazards.

Rising climate risks to assets and markets will mean that real estate leaders should look to a broad range of strategies to protect their portfolios, including strategies that supplement hazard mitigation with social infrastructure for the communities they both serve and depend on to generate a return.







# Social Infrastructure and Climate Resilience

Social infrastructure can enhance resilience by addressing vulnerabilities, promoting equity, creating community assets, and maximizing co-benefits.

Well-designed, carefully maintained social infrastructure is a critical addition to the resilience-building toolkit and is one that real estate is ideally poised to carry out—with benefits for all. But how exactly does social infrastructure boost resilience?

Challenges that test a community’s resilience are often described as shocks or stresses, as defined in ULI’s [10 Principles for Building Resilience](#) report and the Rockefeller Foundation’s [100 Resilient Cities](#) initiative. Social infrastructure builds resilience primarily by reducing vulnerability, thus reducing stresses and increasing a community’s ability to respond to shocks.

“Social infrastructure is the heart of resilience. You can’t have a resilient community if you’re not focusing on social cohesion and shifting power to community members and their neighbors who know their experiences best.”

—Kristin Baja, director, direct support and innovation, Urban Sustainability Directors Network

Shocks and Stresses	
Shocks: Sudden or extreme events or disasters	Stresses: Long-term social, economic, and environmental issues that undermine system responses to hazards. They can increase a community’s vulnerability to shocks and limit its ability to bounce back after a major event.
Examples: <ul style="list-style-type: none"><li>• Coastal flooding</li><li>• Hurricanes</li><li>• Wildfires</li><li>• Pandemics</li><li>• Political or terrorist attacks</li></ul>	Examples: <ul style="list-style-type: none"><li>• Chronic homelessness and lack of attainable housing</li><li>• High unemployment</li><li>• Higher average temperatures</li><li>• Failing infrastructure</li><li>• High poverty and social inequality</li></ul>
Consequences: <ul style="list-style-type: none"><li>• Loss of life</li><li>• Property or infrastructure damage</li><li>• Losses from disruption of business and essential services</li><li>• Secondary hazards (e.g., increased risk of illness from contaminated water supplies or mold after flooding)</li></ul>	Consequences: <ul style="list-style-type: none"><li>• Decreased quality of life</li><li>• Decreased public health</li><li>• Decreased socioeconomic and market stability</li><li>• Decreased social cohesion</li></ul>



Social infrastructure can reduce underlying social, environmental, and economic vulnerability, helping mitigate the effects of shocks and stresses.

As described in the graphic below, the risk (or impact) posed by a climate hazard is composed of [three elements](#): the physical shock or hazard experienced, the human or physical assets exposed to that hazard, and the degree of underlying stress and vulnerability.

For example, a *hazard* event could be coastal flooding, exposure could be the number of occupants or buildings in the floodplain, and *underlying socioeconomic stresses* could be low community wealth or income as well as entrenched racism.

Social infrastructure excels at reducing underlying social and economic vulnerabilities while providing

community assets. If designed to withstand hazards or to protect surrounding areas, it can also reduce environmental vulnerabilities.

**“In thinking about overlapping disasters and chronic stress, investment to create hubs of resilience in communities addresses longstanding vulnerabilities and inequities, builds capacity of civil society organizations, [and] creates a sense of trust and mutuality—all things we know matter for robust social networks.”**

—Anita Chandra, vice president and director, RAND Social and Economic Well-Being

Definition of risk adapted from the Intergovernmental Panel on Climate Change as hazards × exposure × vulnerability.

Social infrastructure can reduce underlying stresses.



Oasis Terraces in Singapore, a polyclinic, retail destination, and community garden. (See project profile, page 40.) (Hufton + Crow)



# Social Infrastructure Can Reduce Environmental Vulnerability

One way in which social infrastructure reduces environmental vulnerabilities is by providing shelter and refuge. Open spaces—such as parks, plazas, and courtyards—can provide respite areas to cool off during hot days, as can air-conditioned indoor spaces. Resilience hubs located on an elevated floor

“After Hurricane Katrina, I visited Kobe, Japan, to learn from their recovery after the 1995 earthquake. Something I’ll never forget from that visit was a post-earthquake development approach called the ‘land readjustment’ strategy. Since the earthquake caused numerous fires that spread easily from structure to structure in the dense traditional Japanese style of urbanism, Kobe created firebreaks in neighborhoods that became parks. The surrounding communities took ownership of the parks, [and they became] a place for festivals and community gatherings.

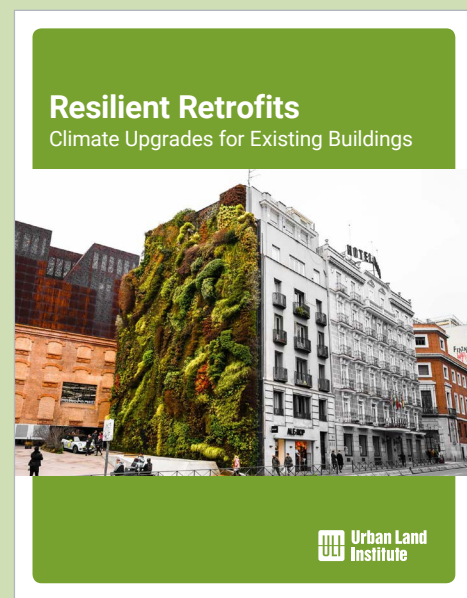
“These parks were also places for disaster preparedness. There are park benches that, when you opened them, had everything you’d need to help people in the aftermath of a disaster. So there’s the direct connection with social capital and neighborhood support, but the parks were also directly related to disaster resilience and of course are beautifully designed spaces that are multifunctional and helped catalyze the rebuilding of those areas post-disaster.”

—Jeff Hébert, president, HR&A Advisors

of a building are an ideal place to wait out a storm or a flood event.

Consider the value of resilient spaces such as waterfront parks with berms or levees that are also walking or biking trails, or sunken sport courts that can store stormwater to reduce flooding, or open space and recreational facilities on elevated ground as in New York’s Lower East Side (see callout box). These interventions can become beloved community assets that not only reduce vulnerability to shocks and stresses but also provide co-benefits that pay dividends before, during, and after a disaster.

For more on preparing an existing building for physical climate risks, see ULI’s [\*Resilient Retrofits: Climate Upgrades for Existing Buildings\*](#) report.



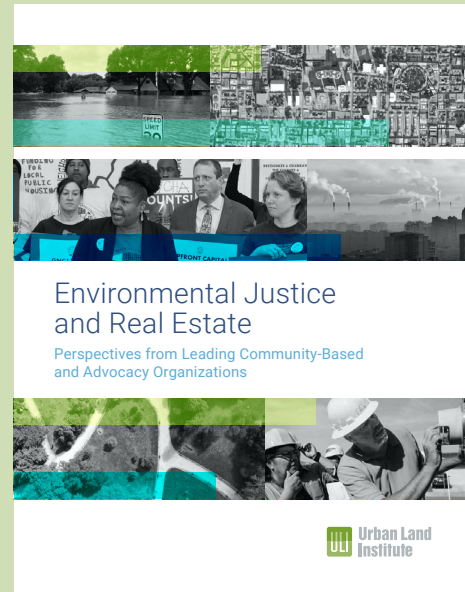


Taking steps to ensure that these spaces are designed or retrofitted to withstand any hazards they are likely to face over their lifetime can maximize dual benefits by offering physical shelter and fostering community.

As documented in ULI's [\*Environmental Justice and Real Estate\*](#) report, low-income and Black, indigenous, and people of color (BIPOC) communities in the United States are frequently most impacted by climate risks. For instance, formerly redlined neighborhoods are [\*disproportionately impacted by flooding\*](#), are more likely to have [\*dangerous air quality caused by the presence of industrial land uses\*](#), and [\*can be up to 20 degrees Fahrenheit hotter\*](#) than wealthier neighborhoods because of historic public disinvestment in green space and tree canopy.

Real estate can therefore prioritize working with these communities to develop social spaces that reduce hazards from flooding, extreme heat, or other hazards.

For the connections among social equity, climate, and the environment, see ULI's [\*Environmental Justice and Real Estate\*](#) report.



## The Lower East Side Coastal Resiliency Project in New York City

Parks designed to withstand floods, storms, or extreme heat can play dual roles as both social infrastructure and hazard protection. New York City, hard hit by Hurricane Sandy in 2012, is working to elevate the entirety of East River Park in lower Manhattan to create a flood-ready park that will shield the neighborhood just inland—an area home to diverse residents and large public housing complexes.

The park has generated both praise and controversy for its multiple redesigns and contested community involvement (see “Co-develop with Communities and Design for Authenticity” on page 45). The park’s evolution through time provides essential insight into the many (and potentially competing) interests at play in the creation of social and physical climate resilience infrastructure in dense, high-risk urban areas. [Learn more.](#)

## Project Profile

### Reducing Environmental Vulnerability: Enghaveparken, Copenhagen, Denmark

[Enghaveparken](#) (Meadow Park) is a historic urban park in Copenhagen that opened originally in 1928, providing important access to open space for neighborhood residents who at that time frequently lived in small, cramped apartments. The park proved to be popular and has been well used over the decades. However, it is located at the bottom of a hill and was hit hard by the [intense cloudburst](#) (a sudden, heavy rainfall event) in 2011 that dumped six inches of rain on Copenhagen in under three hours and caused close to €1 billion (US\$974 million) in damages.

Since then, the park has undergone a major transformation by architecture and urban design firm Tredje Natur (Third Nature) and has become a vital stormwater basin for the area while retaining its role as a historical and recreational neighborhood park.

The park was partially excavated to create water storage capacity, but, importantly, water is still stored above ground in a multifunctional, 2,000-cubic-meter (71,000 cu ft) reservoir that functions as a sport court with stepped seating in dry weather. After rain events, the court fills up and becomes a temporary water pool. Water is also stored in an aboveground

dike topped by a channel and fountain garden, so it becomes a tactile experience visitors can touch and play with, enhancing the park's social and recreational offerings.

Beyond the reservoir, excavations and new perimeter walls render the park capable of holding another 23,000 cubic meters (812,000 cu ft) of water. The park can be completely filled with water in an extreme rain event—in essence, turning it into a giant reflecting pool that still serves the neighborhood as an aesthetic resource. Its 83 large new trees, 11,000 perennial plants, and 220,000 bulbs provide beauty and habitat for urban wildlife.

The park includes social spaces for many other uses such as multipurpose sport pitches, spaces for concerts, rose gardens, a playground, and three pavilions, which expand the social and cultural possibilities on offer.

Enghaveparken demonstrates that green spaces and recreational areas can be designed as social infrastructure that embraces climate risks and uses them to enhance the social experience, reconnecting urban residents to natural functions.



The redesign of Enghaveparken in Copenhagen creates recreational spaces, such as sport courts, that double as a stormwater reservoir during intense rain and use water as a tactile experience for visitors. (*Tredje Natur*)



# Social Infrastructure Reduces Social Vulnerability by Supporting Community Responses to Hazard Events

Traditional physical infrastructure can determine the consequences of a flood or heat wave, but the ability of a community to recover from climate events is deeply affected by the strength of its social infrastructure and social networks.

Strong social networks counteract the forces of social vulnerability by helping communities respond to hazards collectively rather than in isolation. As [Klinenberg notes](#), “When social infrastructure is robust, it fosters contact, mutual support, and

collaboration among friends and neighbors; when degraded, it inhibits social activity, leaving families and individuals to fend for themselves.”

Adequate social infrastructure creates the conditions for organizations and individuals to share resources, organize recovery activities, and maintain emotional attachment to places as they undergo long and difficult roads back from disaster.

## Synergies for People and Nature



Social spaces and biodiversity can work synergistically to support each other. For example, green spaces and recreational areas designed to protect or restore local ecosystems can boost health and wellness for both humans and nature. Learn more about how real estate leaders are acting on biodiversity in [Nature Positive and Net Zero: The Ecology of Real Estate](#).

“In a cross-country comparative analysis, we looked at the distinguishing features of communities that could respond to disaster and mitigate the impacts. Communities that had strong connections among individuals and organizations were better able to marshal resources, figure out what was needed where, address pockets of vulnerability before and after, and think about aspects of infrastructure recovery and human recovery.”

“Even if you hold constant other aspects of risk and vulnerability, like economic status or the devastation of disaster, it still matters to have these organizational ties, institutional capacity, and more traditional social ties.”

—Anita Chandra, vice president and director, RAND Social and Economic Well-Being



The Chicago heat wave of 1995, in which more than 700 people died, is a [prominent example](#). Studies demonstrated that predominantly low-income Black neighborhoods and communities of color experienced some of the highest mortality rates in the city because they lacked the physical infrastructure to reduce heat exposure (such as tree canopy and air conditioning) as a result of structural racism and disinvestment. However, several such neighborhoods also saw some of the city's lowest mortality rates, lower even than some Chicago's wealthiest communities.

The differentiator of overall impact was in the strength of social ties: residents in certain neighborhoods were more likely to check on vulnerable community members to ensure they were not isolated and in danger of overheating at home. In this case, strong social cohesion was the difference between life and death.

Along these lines, interviews noted that disaster recovery efforts that account for, respect, and leverage a community's existing social capital, history, and context will see much greater success.

## Social Infrastructure Helps Communities Address Underlying Stresses

Social infrastructure can reduce social vulnerability by addressing the underlying stresses of social inequality.

The decades- and centuries-long impacts of historic and current structural social inequality—whether the acts of colonization, genocide, and slavery on which real

estate in the United States was founded, or their ripple effects seen in today's ongoing racism, impoverishment, wealth and resource extraction, and police violence—create stresses on communities that [research shows accumulate over time and across generations](#).

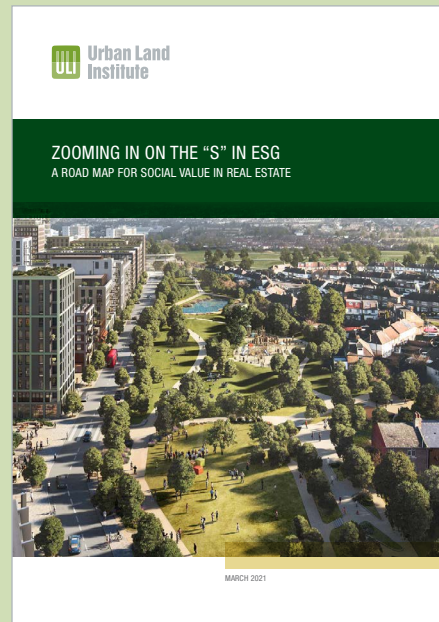
[Uptown Circle](#) in Normal, Illinois, functions as a traffic circle, a stormwater filtration system, a uniting public green, a tranquil water feature, and a place of respite for users of the adjacent multi-use trail. (Scott Shipley)





## Social Equity in Real Estate

Reducing social vulnerability is critical to building resilience, and equitable development can do so by addressing some of the root causes of vulnerability, such as racial or income inequality. Learn more about how social equity is playing an increased role in high-quality real estate development and how to incorporate social considerations through ULI's [\*10 Principles for Embedding Racial Equity in Real Estate Development\*](#) and [\*Zooming in on ESG: A Roadmap for Social Value in Real Estate\*](#) reports.



This cumulative, toxic stress damages individual and community health and well-being, and reduces adaptive capacity to respond to climate hazards.

To counteract this effect, high-quality social infrastructure can offer “space for survival,” in which impacted communities can find support, self-organize to meet their needs by leveraging community assets and social networks, and “bounce forward” by working to transform inequitable systems. Interviews indicate that strong social ties can be a buffering variable that mitigates the negative effects of stress.

“Social spaces that stand out are the ones where residents and communities create their own spaces to insert themselves into the development process in ways that make them more heard than they are otherwise. It’s an act of self-determination and survival, in the sense of not being forcibly or passively displaced. Those are the spaces that have success, because of people taking ownership and empowering themselves over their lives and communities.”

—Wendell Joseph, project planner, Toole Design

## Project Profile

### Addressing Underlying Stresses: School 77, Buffalo, New York



School 77 in Buffalo transformed a vacant school building into energy-efficient, low-cost housing and supportive services for seniors, recreational space for youth, and a home for socially minded arts programs, alongside green infrastructure and a 64-kilowatt community solar array. (*PUSH Buffalo*)

[People United for Sustainable Housing \(PUSH\) Buffalo](#), a community-based nonprofit, works to help the west side of the city thrive after historic disinvestment that has degraded neighborhood housing stock and led to high energy burdens for its diverse, multiracial, and working-class residents.

When the opportunity arose to redevelop a historic school building, PUSH worked extensively with members and residents and New York City–based Hester Street Collaborative to develop a community vision and design, which coalesced around a desire for attainable housing, supportive services for seniors, recreational space for youth, and arts and cultural programming.

What resulted is a mixed-use building that includes both social and climate infrastructure:

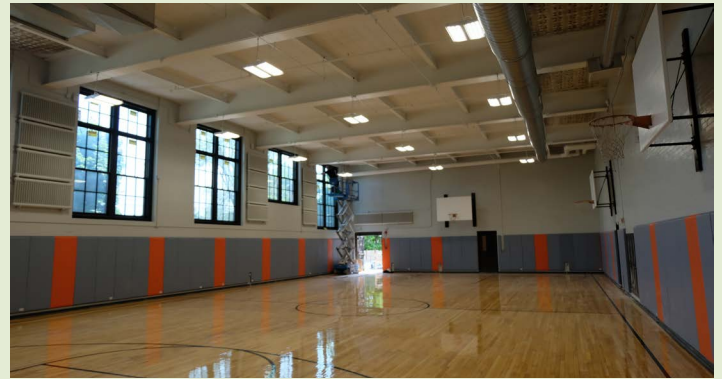
- Thirty energy-efficient, affordable apartments for seniors
- A headquarters for PUSH and another nonprofit, Peace of the City, which is an afterschool program for youth that provides academic and professional skill development
- A black box theater and headquarters for Ujima Theatre Company, which is dedicated to showcasing African American theater
- A green roof that is open to residents as a gathering space (recycled rubber flooring adds fall protection for seniors) and has extensive stormwater management features and landscaping



- A 64-kilowatt community rooftop solar array, the first of its kind in the state to offer 100 percent of its power to low-income subscribers (including School 77 residents); installation was performed in part by PUSH members, and residents can weigh in on allocation of revenue generated by subscriptions

Clarke Gocker, director of policy and strategy at PUSH Buffalo, notes that the development's multifunctional strategy demonstrates the organization's goal of "looking at things intersectionally to maximize benefits, whether for workforce, ecology, or the social determinants of health."

During the COVID-19 pandemic in 2020, the building became a "mutual aid hub" that coordinated relief efforts by distributing groceries and household supplies three days a week. Because climate hazards



Shared gymnasium that hosts community programming.  
(PUSH Buffalo)

such as extreme heat increasingly affect northern cities such as Buffalo, the building's performance during COVID-19 proved its adaptability as a community resource. "That convinced us the building could step up to challenges, for example if there was a need for a cooling sanctuary for residents."

PUSH Buffalo installs a solar array on the rooftop of School 77. (PUSH Buffalo)





# Social Infrastructure Increases Baselines of Health, Reducing Environmental and Social Vulnerability

Underlying stresses and vulnerabilities can take the form of chronic health conditions. People and communities with chronic health challenges are more susceptible to some of the physical impacts of chronic or extreme heat and air pollution, and are more at risk when floods, storms, or wildfires knock out power grids or require evacuation. Social infrastructure that provides places to build physical and mental health through exercise, stress reduction, and access to nature—such as parks and open spaces or safe and walkable street networks—will support healthier communities.

In addition, stronger social networks themselves build better health: studies have found that stronger social networks can have positive impacts on obesity, stroke, and cognitive decline, while supporting healthy behaviors such as decreased smoking and alcohol consumption and increased use of preventative health care services. Conversely,

**Stronger social networks can have positive impacts on obesity, stroke, and cognitive decline while supporting healthy behaviors such as decreased smoking and alcohol consumption and increased use of preventative health care services.**

as noted by researchers Viniece Jennings and Omoshalewa Bamkole, “People who are socially isolated tend to be less healthy, and susceptible to stress, depression, and cardiovascular issues.”

Lastly, there are both nonfinancial benefits and a strong business case for investing in social infrastructure as the Business Case section of this report will demonstrate.





## Project Profile

### Increasing Baselines of Health: Mariposa District, Denver, Colorado



The Mariposa District was designed for greater social cohesion through interstitial and transit spaces such as enhanced streetscapes, public plazas, and green spaces, resulting in documented increases in resident health. *(John Pettigrew)*

The [Mariposa District](#), a mixed-use, mixed-income HOPE VI development in Denver, shows the benefits of designing for social cohesion and community from the start. A well-known project that has received multiple awards for its people-centric design (such as the U.S. EPA's National Award for Smart Growth Achievement in Equitable Development), this project redeveloped an aging public housing community in the La Alma and Lincoln Park neighborhood. The area had previously suffered from higher rates of crime and lacked access to healthy living features compared to most other neighborhoods in Denver.

The redesign, overseen by Seattle-based firm Mithun for the Denver Housing Authority, included more

than [140 community meetings](#) to ensure a robust engagement process. The project focused on social cohesion through environmental design in addition to a comprehensive health strategy, known as [the Healthy Living Initiative](#). The new, transit-oriented district's urban design features support inclusion as an explicit project goal with high-quality interstitial and transit spaces, such as these:

- Enhanced streetscapes featuring wider sidewalks, better lighting, and extensive tree planting and seating to promote comfortable walking and social interactions
- Public plazas for community events and festivals, which are activated with large public art and

a youth music education organization's live performances

- The narrowing of certain streets and inclusion of planted landscape areas; pedestrian-scaled lighting; and art to enhance safety, walkability, and neighborhood character
- Small courtyards around building units
- Added bike paths and a bike-share program

In addition, these design strategies are complemented by a network of parks and open spaces for a range of ages and cultures, from highly popular community gardens to playgrounds and picnic areas.

Post-occupancy surveys of residents overwhelmingly identify a strong sense of belonging; a safe environment; an impressive 30 percent reduction in crime rates from 2005 to 2011; and thousands of hours logged in walking groups, social activities, and significant health increases from the walkable, bikeable environment. After the first phase of redevelopment was complete, 38 percent of residents said their health had improved.

Mithun's Erin Ishizaki notes: "Creating social connections was one of the main strategies as part of the design and healthy living strategies for the neighborhood. The feel of the neighborhood really changed, with residents sitting out front, saying hello to each other—it's a different feeling in the community. None of these features were tremendously expensive, but they displayed a sense of care in the community that wasn't there before. They really encouraged people to be out and about, and [to] feel ownership over their neighborhood."

In addition to tree canopies and building shade features, Mariposa's resilience and [low-carbon](#) credentials include comprehensive [stormwater management strategies](#), which Wenk Associates embedded throughout street rights-of-way and open



Artwork enlivens public spaces. (Mithun)

spaces, in addition to other green infrastructure (bioswales and porous pavements) that will retain and treat a majority of stormwater runoff on site.

The district has achieved LEED Gold for Neighborhood Development, and some buildings have achieved LEED Platinum. Energy consumption was reduced by 50 percent and [75 to 80 percent](#) of rooftops were devoted to solar arrays that complement a geothermal HVAC system and drought-conscious water strategies such as low-flow toilets and greywater recycling.

Importantly, the redevelopment prevented displacement by staging construction, replacing units one to one, and adding more affordable units. Nearly half of the original residents returned—a rate two to three times higher than is typical for other HOPE VI redevelopments—which helped preserve existing relationships and foster further community cohesion.





# The Business Case for Social Infrastructure

With wide-ranging benefits, financial and otherwise, investing in social infrastructure is a “no-regrets” strategy that enhances development even if a climate hazard never appears. Incorporating social infrastructure into real estate development can help projects stand out and build a competitive advantage while accruing benefits across various categories of social infrastructure. Although benefits may look different for a park or garden as compared to a resilience hub, the quality and quantity of observed gains are clear.



# Reduced Downtime and Costs of Disruption from Climate Events

Strong social infrastructure and social networks facilitate quick responses and organization when a climate event strikes, reducing the amount of time an asset is out of commission.

There are wider community benefits as well: ensuring developments have safe gathering points, provide opportunities to coordinate recovery activities, distribute supplies, and help community members remain connected.

In addition, community and asset recovery can support each other and mutually increase each other's functionality after climate hazards. For example, a building whose occupants are well organized and can resume operations quickly can then serve as a hub for neighborhood recovery activities, much as the Rockaway Beach Surf Club did after Hurricane Sandy in New York City.

In turn, faster neighborhood recovery will help individual buildings resume their full potential of functionality (e.g., by ensuring streets are cleared enough for people to access buildings).

**"Returns will accrue to developers who transform the way they design and build, because a significant part of the market wants to live in ecologically secured places that are also socially attractive."**

—Eric Klinenberg, Director of the Institute for Public Knowledge, New York University



[Funan Mall](#) in downtown Singapore combines retail, office, and co-living in a blended live/work/play environment, bringing multiple types of users together in a creative, playful environment. (Darren Soh)



# New Funding or Financing of Vehicles and Public/Private Partnerships

Including social infrastructure elements in development can open up access to new sources of public and private funding for climate and ESG projects.

For example, federal Building Resilient Infrastructure and Communities grants can provide matches for resilience hubs or parks that also reduce flood impacts, while private investment is looking to

support development with strong environmental and social returns.

In addition, city governments are turning to partnerships with real estate to develop and activate public land, such as [East Cut Crossing](#) in San Francisco by Nestory Park. Such partnerships provide new project opportunities for developers.

“At [East Cut Crossing](#) in downtown San Francisco, there are three contiguous sites already designated for future affordable housing, office and commercial, and some market rate housing— with a park in the middle. However, entitlements take an extremely long time in San Francisco. We could fence it off and leave it there, but right now, we’re working with our client and the city to transform it and allow it to bring a community together. It’s a temporary activation for several years, including all these activities: an outdoor cinema, pickleball, two street soccer courts, outdoor fitness gym, beer garden, local food experiences, dog park, and a playground. It’s public land, and the private sector is helping push this momentum forward.”

—Riki Nishimura, principal and senior urban designer, Populous



# Increased Marketability, Diversification, and Futureproofing

Many types of social infrastructure can boost marketability on their own by providing valued amenities, because the projects that include high-quality community spaces help create unique and authentic experiences that attract users and that differentiate projects from the crowd.

For example, adding a community garden or a green space that doubles as flood protection to a development can help attract health- or climate-conscious residents or employees. As documented in ULI's [Returns on Resilience: The Business Case](#), the Green Cities Company's 6 New Street in Boston used its resilient landscape and building elements in branding and marketing to successfully achieve faster leasing, higher renewal rates, and improved occupancy.

A mix of community spaces is increasingly valued as well. As markets and demand for space types have changed after the COVID-19 pandemic, many urban residents are seeking dynamic, flexible, mixed-use spaces that can help transcend social isolation, blur boundaries between spaces, and allow interconnections between professional and personal lives.

For example, HKS Architects identified [five new drivers](#) for live/work spaces that will be in demand in modern cities:

1. Human connectivity
2. Adaptability
3. Connectivity to nature
4. Health and well-being
5. Affordability and equity



Green Cities Company's 6 New Street in Boston embeds flood-resilient landscaping into its open space, enhancing value for the building and community. (Boston Planning & Development Agency)



Likewise, Gensler's [Design Forecast 2022](#) also identifies a similar set of key directions for successful development:

1. Climate resilience
2. Mixed-use downtowns
3. Greener public and privately owned public spaces
4. Support for local arts and culture and social equity

"It's really important to think about these spaces not only as singular experiences or projects. To be able to futureproof communities through social infrastructure, we have to think about these spaces as a network. They all in some ways are interconnected. When you do that consciously, you realize the importance of these spaces as the glue that brings everything together."

—Riki Nishimura, principal and senior urban designer, Populous

Social infrastructure plays an essential role in meeting each of these needs, helping protect or increase long-term returns by keeping assets culturally relevant and in demand. Mixing uses within assets creates diversification, flexibility, and synergy of uses, generating additional revenue and value for low incremental costs and showing better long-term performance over time. For example, apartment buildings with strong ground floor retail can often generate up to [5 percent higher rental premiums or more](#).

## Enhanced Asset Value

Asset value is built in part on the desirability of location, and desirable locations can be created or enhanced through social infrastructure that create places people want to spend time in or live near. Social infrastructure can support both individual asset value and the values of nearby properties, building desirable locations for future investment.

For example, high-quality parks and green spaces can raise surrounding property values by [8 to 10 percent](#) and can create both higher sales volume and sale premiums, according to interviews with developers (see the Howard Hughes Corporation's project profile on page 53 for more). [A 2022 analysis](#) by the Trust for Public Land found that New York City's park system provides more than \$15 billion in additional property value for homes within 500 feet of parks.



ULI's [The Pandemic and the Public Realm](#) report contains more than 30 examples of how world cities adapted their public spaces to meet changing needs for urban living.

## Lower Transaction Costs and Ease of Development

The real estate development process involves numerous transaction costs and requires approvals from a wide array of stakeholders, whether for site acquisition or filing of permits and undergoing planning review and the entitlements process. Projects that incorporate climate-resilient,

community-oriented spaces that improve quality of life—in line with community goals—can avoid pushback that could otherwise create timeline and cost overruns and require extensive human resources for negotiations and legal challenges or could even shut the project down completely.



The Alley at [Dairy Block](#) mixed-use redevelopment in Denver is illuminated at night, creating a warm and inviting ambience. The Alley is home to fitness activations, including cycling, yoga, run club, live musicians, art enthusiasts, shoppers, and diners. During the pandemic, this outdoor oasis was a safe place for the community to gather while maintaining social distance. (*Jeff Frierberg*)

**"In my time in the private sector, the number of lawsuits we could avoid by doing good community outreach was significant. You need to have the design serve the whole neighborhood."**

—Delma Palma, deputy director of Design Services, Oversight, and Expediting, New York City Housing Authority



# More Stable Markets, Communities, and Returns

Investing in social infrastructure can help meet communities' social, environmental, and economic needs, which in turn helps communities remain financially resilient and supports better long-term returns for everyone.

As explained in ULI's [10 Principles for Embedding Racial Equity in Real Estate Development](#), investing in equitable development can increase occupant demand and tenant retention, protecting operating income. By developing in partnership with local

stakeholders, community wealth can be increased, building a more attractive market for investment and enabling stronger returns from future projects.

Markets can be further stabilized through investment in project features that are both social and resilient, as developers and investors increasingly seek assets and markets prepared for the impacts of climate change. This stabilization is explored in ULI's and Heitman's report series about [climate risk and real estate investment decision-making](#).

"Whether you have a major capital project or a smaller piece of development, you need collaboration and consensus among different groups. The echo chambers we see today, in which people are isolated, are adding up to transaction costs among development. Having people discovering commonness through open space or on the street can be the first step—and may have the indirect effect—of reducing those transaction costs."

—Yuxiang Luo, director, James Lima Planning + Development

## Project Profile

### Stabilizing Communities: Freedom West, San Francisco, California

Housing can be an important host to many types of social infrastructure, especially when designed to gather or support intentional community. For example, [Freedom West](#), a housing cooperative founded to preserve the cultural and economic stability of the San Francisco Fillmore District's African-American community, which had experienced intentional displacement by the city's urban renewal policies in the 1960s, is now being renovated and expanded to upgrade the quality of all existing units and to add 2,000 more, while preserving the

cooperative and its ownership model in a unique profit-sharing partnership with private developers [MacFarlane Partners](#).

The project prioritizes social and economic resilience through homeownership and new community and open spaces, as well as cooperative-owned retail and a STEM education facility for workforce development, all of which will help create stability and decrease displacement for existing residents in the city's blazing housing market.

## Attraction of Talent

Multiple interviews highlighted the value that social infrastructure—specifically, high-quality parks and open space and an array of destinations within a walkable pedestrian network—adds in attracting professional talent. Companies now frequently

locate where their talent pool wants to live and where contributing to the vibrancy and livability of a market through building social infrastructure can help ensure that a company continues to draw skilled professionals.

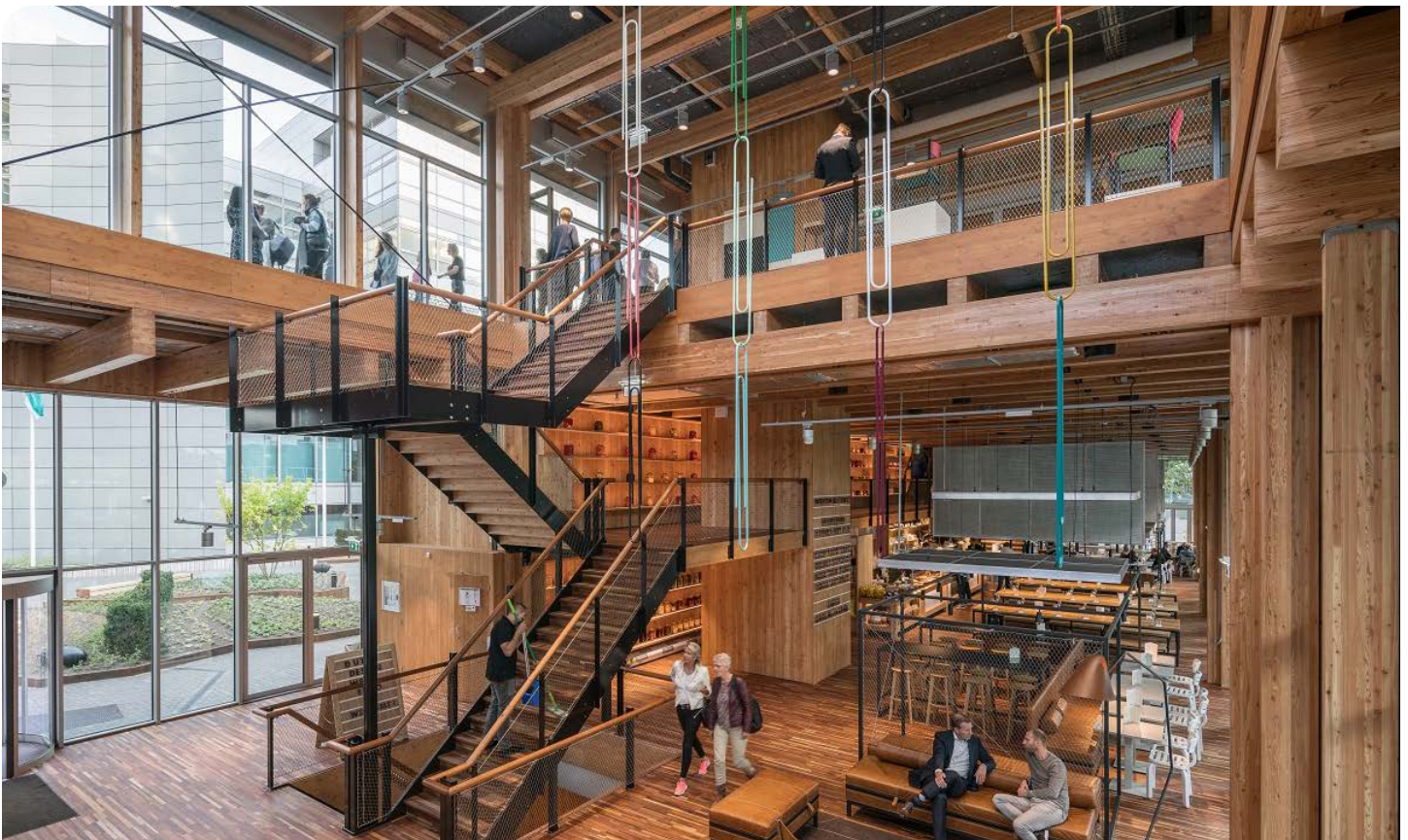
## Reputational Benefits

Companies that act authentically on social infrastructure and ESG stand to improve their brand. Social infrastructure, as well as incorporating social equity considerations into development in general, is a critical aspect of any well-rounded corporate ESG strategy, which has come into increased focus since the racial justice reckoning experienced globally in 2020.

Companies will be increasingly expected to integrate community-oriented spaces into core business

practices if they are to be considered competitive on ESG going forward. For instance, nearly 70 percent of investors and almost 100 percent of investment managers surveyed for ULI's [\*Social Impact: Investing with Purpose to Protect and Enhance Returns\*](#) report expected their social value and social impact activity to increase over the next three years.

The largest market driver behind this acceleration, identified by 75 percent of investors, was public pressure and reputation.



*Cirol* in Amsterdam, a mixed-use building by ABN AMRO that demonstrates principles of building circularity, features a large lobby where people can mingle. (Ossip van Duivenbode)



# Sustainability and Health and Wellness Certifications

Inclusion of social and community infrastructure spaces and considerations factor into some of the most recognized green building and wellness certifications: LEED, WELL, and Fitwel. Including social infrastructure can help secure a verifiable

symbol of a high-performance project, and evidence shows building certifications can boost [rental values](#) by an average of 11 percent, increase [sales prices](#) by 25 to 77 percent (class A vs. class B offices), and achieve [faster lease-up](#).

## Emerging Methods of Calculating Broader Returns on Investment

Interviews suggested that social infrastructure can create wider returns to the community that are not traditionally captured in return on investment calculations, a finding that echoes expert input on ULI's [10 Principles for Embedding Racial Equity in Real Estate Development](#) report.

For example, when calculating the returns from a new recreational green space, in addition to more common calculations on reduced stormwater loads for the sewer system, reduced insurance costs from potential storm damage, or increased property values for surrounding real estate, some consultant firms

such as HR&A are exploring including the benefits of resulting increased nearby life expectancies. Other benefits could include reduced costs of emergency services and health care provision (see the Community Support and Development Spaces and Resilience Hubs section, page 59).

Interviews indicated that the inclusion of broader social benefits from new infrastructure projects will likely become more commonplace, even if factoring them into a pro forma or into project financing is still emerging as accepted practice.



[Van Aken District](#) in Shaker Heights, Ohio, redeveloped an automobile-oriented strip mall as a dense, walkable district with a central public gathering space for residents and visitors to share. The lawn and plaza are designed for everyday use and to host a variety of public programs. (Aerial Agents)





# How to Create Successful Social Infrastructure

Creating successful social infrastructure means including a wider range of goals and methods for development. Research and interviews suggested the following strategies for real estate when pursuing social infrastructure and identified key characteristics of successful social infrastructure.



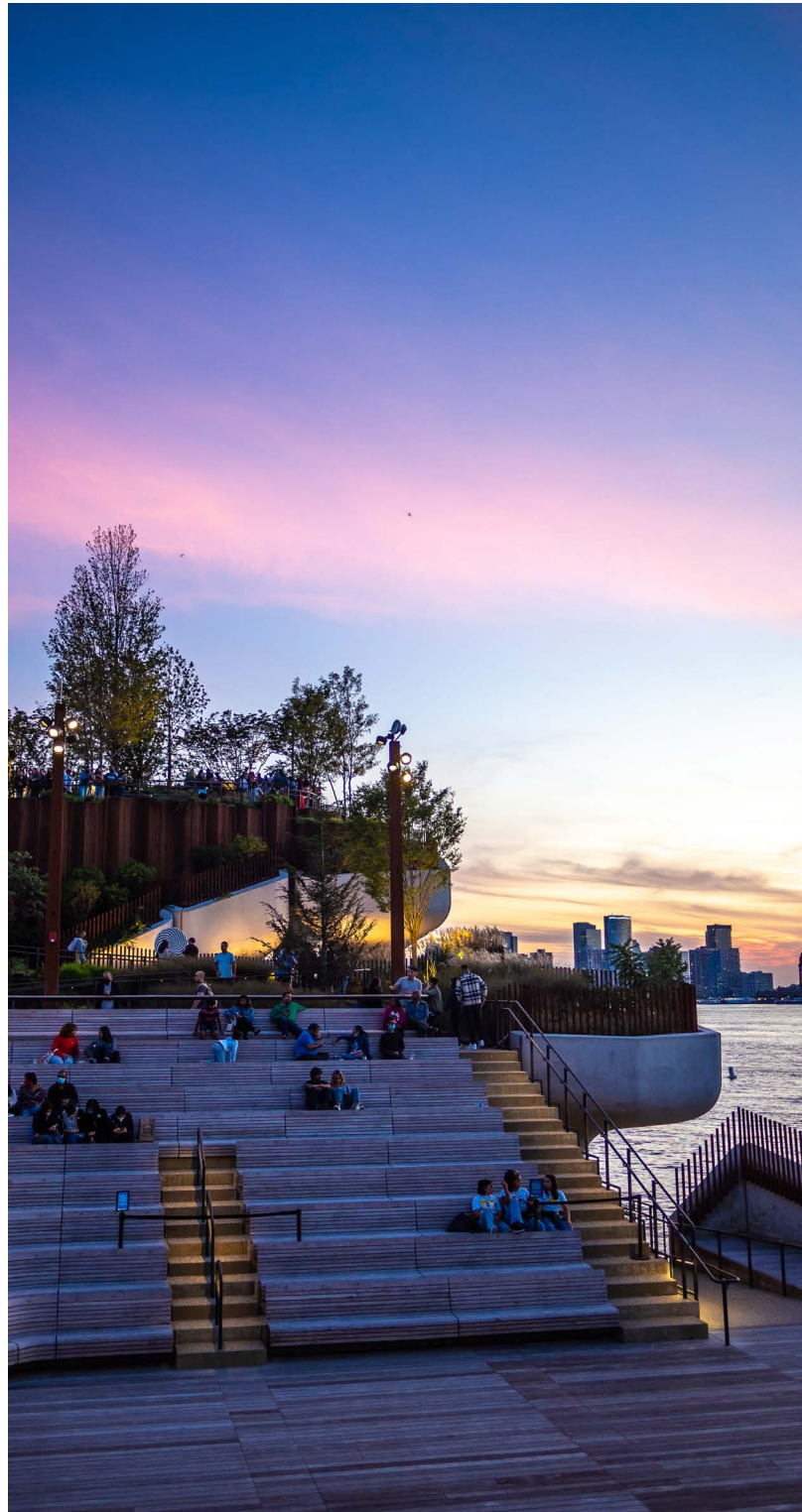
# Strategies for Integrating Social Infrastructure into Private Development

Real estate leaders can look to the following strategies for helping ensure that social infrastructure adds value to developments.

## Make New Space or Activate Existing Space

Social infrastructure does not happen by accident; it needs to be planned and integrated intentionally. When planning a new development or major renovation, developers should allocate a portion of square footage to one or more types of social infrastructure. For example, include a public park, plaza, or roof terrace; dedicate part of retail space to a locally owned café; or build a resilience hub for residents.

Social infrastructure can also be innovated in existing spaces. For example, building managers can use a lobby to coordinate relief efforts after a climate hazard event, partner with a food bank to distribute supplies, or host pop-up medical clinics to increase access to health care.



The table below provides further examples of how social infrastructure spaces can be integrated into various property types.

How to Create Social Infrastructure across various Real Estate Sectors			
Multifamily	Office	Retail	Hospitality
Build green spaces for residents (e.g., communal courtyards, gardens, or natural areas and trail networks).	Build green spaces and recreational areas (e.g., plazas, parks, or green roofs).	Build interstitial and transit spaces (e.g., atriums or arcades).	Build green spaces and recreational areas (e.g., plazas, parks, swimming pools, or sports courts).
Include internal recreational areas for residents (e.g., recreation or exercise areas, child playrooms, or meeting spaces).	Include third place–like amenities for employees that encourage social gathering (e.g., wellness spaces, coffee bars and shared dining areas, or lounge areas).	Build green spaces or recreational areas (plazas, parks).	Emphasize well-designed common or interstitial spaces for guests or local residents (e.g., attractive lobbies or co-working spaces with seating and amenities), or game rooms.
Create pocket neighborhoods.	Reserve leasable space for community support facilities run by local nonprofits or community groups.	Reserve tenant spaces for locally owned commercial establishments and third places, especially those owned or operated by socioeconomically marginalized groups.	Include third spaces (bars, cafés, or restaurants) for guests or residents.
Include community-oriented features in interstitial spaces such as front porches or shared balconies.	Include community support facilities such as child-care spaces for employees.	Include a diverse mix of third places that promote social experiences, such as cafés, restaurants, play spaces, or entertainment facilities.	Incorporate event and meeting space for local arts and culture organizations, especially for socioeconomically marginalized groups.



## Project Profile

### Make New Space: Taylor Street Apartments, Chicago, Illinois



Taylor Street Apartments blends market-rate and affordable housing, common spaces for residents, public open space, and a branch of the city's public libraries. *(Tom Harris)*

Taylor Street Apartments, completed by developers [Related Midwest](#) and winner of a [2022 ULI Award for Excellence](#), offers an innovative, mixed-use, mixed-income development that blends market rate and affordable housing. Through a public/private partnership, the development includes Chicago Housing Authority residential apartments and the Little Italy Branch Library on the first floor.

Communal living for residents and community-building for the neighborhood are integrated seamlessly. The apartments feature amenity spaces such as an outdoor deck, a community room, and a fitness center. Site programming staggered the buildings to create a

new public open space and preserve the existing onsite community garden, the Taylor Street Farm.

The library, a classic form of social infrastructure, activates the ground floor and the neighborhood at the corner of the site. It has high ceilings, glass windows, and large open spaces for visitors of all ages, improving visual access into the building and enhancing connection to the street. Programming includes lectures, workshops, and book clubs, as well as play/learning spaces for young children and parents, a media space for teens, a community room, and workforce development spaces for adults.

The LEED Silver building is also high performing on sustainability. Architects Skidmore, Owings & Merrill incorporated daylighting, natural ventilation, and heat pumps to reduce energy consumption, while a green roof with native plantings supports biodiversity and gathering space for residents.

The surrounding neighborhood, wary at the outset of incoming public housing, has welcomed the combination of affordable housing with community-centered spaces for everyone, and the project has become a neighborhood catalyst and community asset.



Taylor Street Apartments was also able to preserve an existing, on-site community garden, another treasured form of social infrastructure. *(Tom Harris)*

### Use the Areas in Between

The surrounding fabric of buildings and spaces can support social interactions. The design process can focus on the places where people might gather and should emphasize pedestrian walkways, high-quality streetscapes, and pleasant, shared building entrances, atriums, or seating areas. These areas should become spaces where people like to linger.



## Project Profile

Use the Areas in Between: Hopeworks Station North, Everett, Washington



Hopeworks Station North, a low-income housing development in Washington state, uses a courtyard, community garden, and open-air hallways to bring residents together. A lobby café and teaching kitchens support on-site job training for residents who have experienced homelessness and are looking to reenter the workforce. (*Benjamin Benschneider*)

[Hopeworks Station North](#), winner of a 2022 ULI Award for Excellence, is a development in Everett, Washington, that combines supportive services with low-income housing and features key social design strategies.

The building houses 65 apartments dedicated to veterans, formerly homeless youth, and low-income families and is designed around a central courtyard green for residents to enjoy. The courtyard features community gardens and play areas for the development's families. Jon Hall, principal at GGLO Architects (one of two architecture firms involved),

noted in an [interview](#) for *Metropolis* magazine: "The inner courtyard is the mixing ground for everyone."

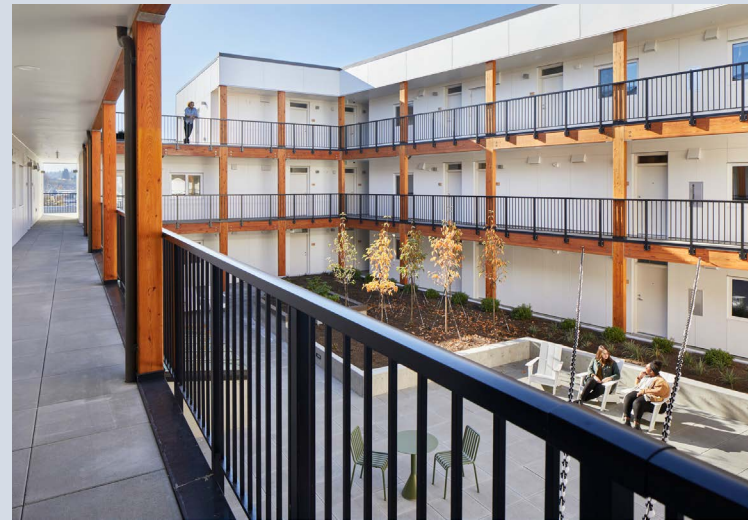
Around the courtyard, open-air hallways provide access around the building as well as pleasant views onto the green space in which residents can meet and converse—an unexpectedly useful arrangement during the pandemic when outdoor meeting space was at a premium.

In addition, the building features community support facilities, such as on-site job training in a commercial café located in the lobby, a set of teaching kitchens,

a community meeting space, and a training academy meant to encourage connection and facilitate job reentry for residents.

Moreover, the building has significant sustainability strategies built in to reduce both operational and embodied carbon. Hopeworks is part of the International Living Future Institute's Living Building Challenge Petal Pilot Program for Affordable Housing and has earned LEED Platinum certification.

Energy-efficiency measures (such as the outdoor hallways) mean the solar panels covering the roof can provide 105 percent of residential energy demand, and the building is expected to achieve the ILFI Living Building Certification's Energy Petal. This local energy supply can provide power during a grid outage, while the panels reduce solar heat gain through the roof, helping cool the building.



Hopeworks Station North's exterior and interior courtyard. *(Benjamin Benschneider)*

## Mix Uses

Developments that serve multiple functions can attract more types of users and meet a variety of needs, helping ensure spaces are activated throughout the day and creating more opportunities for social interaction. For example, an office developer that includes retail spaces or restaurants (perhaps overlooking a shaded courtyard to add visual interest and heat island reduction) can ensure the property does not empty out after typical work hours but instead hosts people enjoying leisure time together and forging stronger social bonds.



## Project Profile

### Mix Uses: Oasis Terraces, Singapore



Oasis Terraces, which combines a polyclinic with a community plaza, communal gardens, play spaces, gyms, retail, dining, and more, is richly planted with terrace greenery intended to be maintained by neighborhood residents. Plants cool the building from Singapore's rising heat, and an elevated ground floor and basement retention tank help protect the structure and surroundings from flooding. (Hufton + Crow)

Singapore's Punggol neighborhood will soon be home to a new neighborhood center and polyclinic known as [Oasis Terraces](#). Designed by London-based [Serie Architects](#) for the Singapore Housing and Development Board, the building is intended to be the mixed-use social heart of the neighborhood.

A third of the building will be home to new health care facilities, while the rest is dedicated to a community plaza, communal gardens, play spaces, gyms, retail, dining, and learning spaces, blending multiple types of social infrastructure: community support facilities (health care) with parks and green spaces,

architectural design strategies, and third places. A sloped pedestrian walkway lined with plantings leads from the waterway and multiuse trail at the site's edge up to the community gardens on the roof.

The project's goal of creating community connections is enhanced by the sloping terrace gardens, which will be maintained by residents. Serie notes: "Our design is about the successive framing of community space with garden elements. The plaza at the heart of the scheme is framed by a series of garden terraces sloping towards the waterway."



Singapore's tropical location and climate render it intensely vulnerable to extreme heat and humidity, as well as to flood risk from heavy rains and high tides. Therefore, the design shelters the 8,600-square-foot plaza under one of the upper floors of the building, creating shade and keeping the space comfortable in warm weather. Similarly, the building's light, airy design allows breezes to flow through the building, and the exterior garden terraces are covered in plants, both of which promote natural ventilation and cooling.

Given its waterfront location, the site also features flood protection measures. The ground floor is elevated above base flood elevations, and a detention tank belowground collects runoff from the first floor, terraces, and roof and discharges it slowly into the adjacent waterway, reducing flooding risk to surrounding areas. The tank also filters and removes debris from runoff before entering the waterway.



The large community plaza at Oasis Terraces. (Hufton + Crow)



# Characteristics of Successful Social Infrastructure

To maximize resilience returns and community co-benefits, interviews indicated that the most successful social infrastructure incorporates the following strategies into all aspects of design, planning, and management:

- Pursue social equity and access.
- Reach for multiple co-benefits.
- Co-develop with communities, and design for authenticity.
- Prioritize maintenance and programming.

These strategies will help ensure that social infrastructure delivers lasting value where it is most needed.

## Pursue Social Equity and Access

Developing social infrastructure, as well as creating co-benefits that address the ever-looming challenge of climate risks, inherently involves asking the question, “Which members of our community need the most support before, during, and after climate crises, and why?”

Social vulnerability research indicates that often, in addition to low-income and BIPOC communities, those most affected by climate disasters and stresses include elders, women, socially isolated residents, people with different abilities, and those without health insurance or with chronic health conditions. Successful social infrastructure will help create tight-knit social networks to provide resources to those most affected and work to reduce the root causes of disproportionate impacts.

Including social infrastructure as a core aspect of real estate development therefore implies a shift in mindset toward equitable development and toward a recognition that real estate is responsible for contributing to community well-being.

In addition, social infrastructure spaces must be designed with the needs of all users in mind and must consider many different lines of identity:



age, sex, gender identity, race or ethnicity, religion, socioeconomic status, or sexual orientation. This universal design approach should include designing for both physical accessibility for people with different abilities and for social, economic, or cultural accessibility by removing barriers such as high walls, fences, expensive entry costs, or excessive security and policing that may discourage people from marginalized communities from using the space. Accessibility is key to social infrastructure that is welcoming to everyone.

## Project Profile

### Pursue Social Equity and Access: The Eaton DC, Washington, D.C.

Hotels can offer important gathering spaces and programming to support community building and those working to reduce social inequality. The Eaton DC, a hotel with locations in Washington, D.C., and Hong Kong, was founded by Katherine Lo as a mission-driven, equity-focused hospitality experience. It is based on the idea that “hospitality’s connection to the community can be generative and sustainable,” according to Katie Petitt, the hotel’s director of impact, as quoted on The Eaton DC’s [website](#).

The Eaton DC welcomes artists, activists, and innovators, and it includes gathering spaces open to guests and the public—from a coworking space to a library and art exhibits filled with socially progressive texts and artwork. For example, in summer 2022, the art spaces featured an exhibit by Maurice James Jr. called “Revisionist History”—described as an

“alternative reality where Black Culture and Folklore is American Pop Culture”—in addition to works highlighting gender identity and orientation by local LGBTQ+ artists.

The D.C. hotel’s effort to be a “a welcoming and inclusive cultural hub” includes 12,000 square feet of event spaces, which have hosted various local nonprofits focused on social justice—from the Smithsonian Asian Pacific American Center to the March on Washington Film Festival to the Color of Change.

In addition to creating welcoming spaces that bring diverse groups together, the hotel provides co-benefits for environmental and human well-being as a certified LEED Gold building that hosts wellness offerings such as yoga, meditation, and sauna spaces.

## Reach for Multiple Co-Benefits

Creation of social infrastructure that addresses social, financial, and environmental vulnerabilities will provide multiple benefits. For example, a mixed-use, multifamily development with a first-floor food cooperative and a publicly accessible park or community garden in front can increase attainable housing supply; enhance employment opportunities and food access; and strengthen stormwater management, heat island reduction, and biodiversity.





## Project Profile

### Reach for Multiple Co-Benefits: Via Verde, New York City



Via Verde's extensive green and interstitial spaces include numerous green roofs, plazas, courtyards, and gardens, emphasizing public space over private space and adding important social infrastructure to mixed-income housing. (*Jonathan Rose/Dattner Architects*)

When carefully designed, social infrastructure in development can create multiple co-benefits and community assets, from affordable housing and green space to carbon emission reductions and stormwater management.

[Via Verde](#) (The Green Way) is a prime example of combining multiple strategies for broader impact. Completed for developers Jonathan Rose and Phipps Houses, Via Verde is a mixed-use, mixed-income affordable housing project in New York City's South Bronx neighborhood. Via Verde provides more than 220 units (151 rental apartments for low-income households and 71 co-ops for middle-income

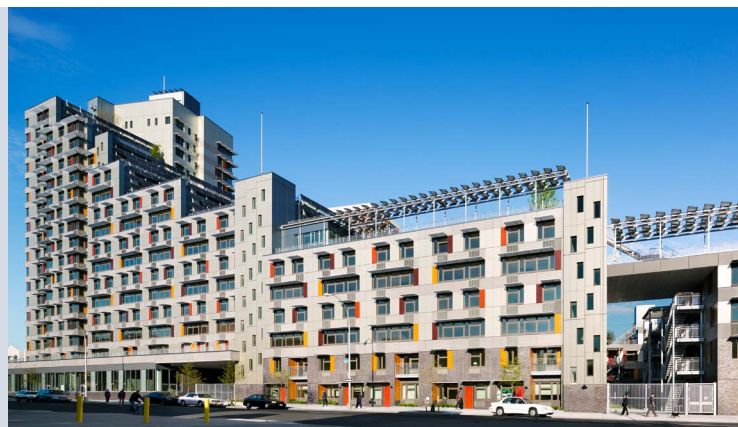
households), along with 7,500 square feet of retail and community facilities and 40,000 square feet of open space.

The site links low-rise townhomes, a mid-rise duplex building, and a 20-story tower through a dynamic series of stepped green roofs. The design centers on shared common areas, including a public plaza and a central courtyard with a play area and amphitheater, as well as multiple intensively planted and accessible green roofs such as a conifer garden, orchard garden, community garden, fitness garden, and several "wave gardens," all on separate but connected roof levels.

Public space over private space is emphasized in each of these features, and instead of private penthouses, the top floor features a community room and dining terrace open to everyone. Project architects at Dattner note: “Social sustainability is key, offering residents opportunities for interaction, exercise, and play that reinforce a sense of community and vitality.”

Additional elements of social infrastructure include a common workspace on the first floor, a health education and wellness center operated by Montefiore Medical Center, a health-oriented retail space, and a fitness center.

The LEED Gold project is well prepared for increasing heat and rain. Cross-ventilation and solar shading reduce heat gain, as do the green roofs, which also provide stormwater management. Rainwater



*(Jonathan Rose/Dattner Architects)*

harvesting tanks and drought tolerant vegetation reduce water usage and increase landscape resilience to high temperatures. High-efficiency mechanicals and appliances, and a 66-kilowatt building-integrated photovoltaic system on roofs and facades drastically reduce use of energy and fossil fuels.

## Co-Develop with Communities and Design for Authenticity

If social infrastructure is meant to serve community well-being, community members themselves are in the best position to determine how to achieve that goal. Real estate can treat existing community stakeholders and organizations as essential partners for the following:

- Identifying community needs that can be met by a project
- Incorporating local culture and history to create authentic, distinctive places
- Adding spaces and programming that build local economies, which in turn generates resources and capital that support resilience

Working with communities to develop places that feel genuine helps build deep, lasting engagement and creates social spaces that help communities feel their experiences are reflected in the built environment.

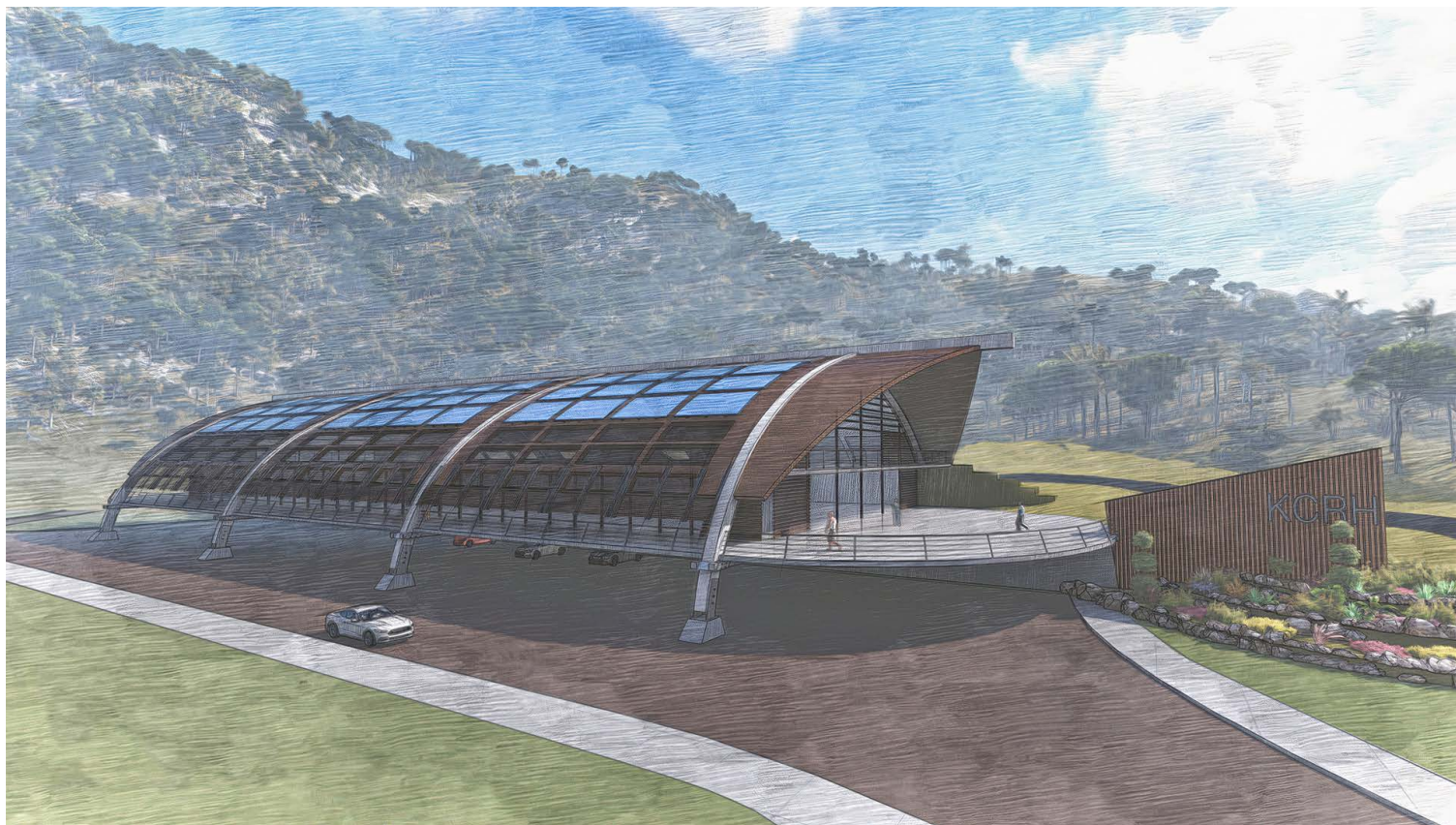
**“Authenticity is everything. When a space is not authentic, people engage less and less, or only superficially. People can spot it a mile away when something’s real or not. Spaces that last are authentic and genuine, because people feel the most safe and the most seen.”**

—Wendell Joseph, project planner, Toole Design



## Project Profile

### Co-Develop with Communities: Ko'olauloa Community Resilience Hub, Hau'ula, Hawaii



Designs for a new community resilience hub for Hau'ula, outside Honolulu, provide shelter in nearly any emergency while helping support cultural regeneration and community well-being. The building's shell was inspired by elders' stories of riding out hurricanes under canoes. (+LAB)

In recent years, Hau'ula, an isolated community on the island of Oahu—located outside Honolulu and home to several thousand residents with thousands more living in the region—has been working to develop a community resilience hub.

Directly fronting the ocean at low elevation, the area is in an extreme tsunami zone and 80 percent of homes are vulnerable to storm surge and sea level rise. With only one road in and out, the community will need to be able to shelter in place in an emergency, but there is currently no such shelter facility.

Recognizing this gap in protection and the community's high poverty rates, the Hau'ula

Community Association and its partner nonprofit Hui o Hau'ula have worked to establish a [resilience hub](#) that combines a community center for their long-running social and cultural programs and services with a state-of-the-art emergency shelter.

Having sought funds from city, state, and federal funding sources—from city budgets to matching federal Building Resilient Infrastructure and Communities grants—the association brought on architecture firm +LAB and the local [SHADE Institute](#) to help guide a community-engaged design process. An extensive outreach process began, including a long series of meetings and consultations with residents and elders that continued even through the COVID-19 pandemic by pivoting to virtual meetings.

With more than 40 nonprofit and community partners, according to Hui o Hau'ula executive director Dotty Kelly-Paddock, the new resilience hub will allow the community center to continue its programs for eviction prevention and rapid rehousing, after-school care for children, exercise, arts and music, seniors, residents with different abilities, medical care and dialysis, and job training.

"People need to be able to survive and thrive here. We can do much more to support the community in a disaster but especially during regular times, when people have to drive two to three hours a day away from their families to find any work. This resilience hub can provide an infrastructure for doing all of that," Kelly-Paddock notes.

The physical shelter facility, designed to accommodate 2,000 and the first of an upcoming network, will be designed beyond building code to the FEMA P-361 standards for safe rooms from tornadoes and hurricanes. It will be located on higher ground out of the tsunami zone and above flood elevations.

The shell of the building, whose form was inspired by elders' stories about the ancient Hawaiian practice of riding out storms under canoes, will be able to withstand category 5 winds and flying debris; it will also be a class 4 fireproof building. Illya Azaroff, a +LAB architect, notes that the design is pursuing "near-absolute protection."

Four sources of power—solar, geothermal, hydropower, and waste-to-energy—are intended to support continuous operation in all conditions, and the building will serve as a cooling center during extreme heat. Battery storage and a microgrid means the building can jump-start surrounding buildings as well after an outage.

The design is targeting Living Building Challenge certification and exploring Passive House, as well as WELL or Fitwel, to assist the community—which struggles with conditions such as obesity—in increasing healthy living.

Ecological and cultural regeneration guides the site's design. Informed by the traditional Hawaiian land management system of ahupua'a, the rest of the site will support a forest zone with native trees, stream restoration, and native breadfruit tree agroforestry and medicinal plant production to support food access.

Local materials and a local workforce will build the structures, and the center will teach traditional carving, dancing, and language in a special structure built by the community.

According to Azaroff, "It's not just about being sustainable and resilient, you need to be restorative and regenerative. You can ask yourself, 'What can the land provide that can help repair the earth?' because that's what we need at this point."



## Prioritize Maintenance and Programming

Proper maintenance ensures that social spaces remain welcoming and safe to everyone throughout the lifetime of the space, whereas poorly maintained spaces deter users and negatively impact their surroundings. Designs that balance aesthetics with ease and cost of maintenance, as well as funding streams that include maintenance costs, will protect social infrastructure from running counter to its original goals. Similarly, high-quality social programming makes sure spaces remain well used and in high demand.

In addition, many parties are responsible for keeping a community- or public-oriented space and its surrounding neighborhood lively, attractive, and well programmed. Those parties include, for example, tenants, residents, associations, or larger business groups. Working toward building social cohesion at the asset- and community-level helps the parties work together on maintenance for the long term.

**“When it comes to long-term management, that typically goes beyond just the hands of the developer. It has to be a collaborative effort. Having cohesion on a social level makes sure you have many entities being part of maintenance, operations, and programming to reduce your burden and make sure the outcome is optimal.”**

—Yuxiang Luo, director, James Lima Planning + Development







# Social Infrastructure Examples

Many different types of spaces can provide areas for community members and stakeholders to gather, interact, and build connections that reduce vulnerability, promote equity, and become valuable community assets. Co-benefits compound when these physical spaces are also designed with features to ensure they can reduce the impacts of a climate hazard, continue operating during hazard events, or resume operations quickly afterwards. The following examples represent a small sample of the types of spaces that can serve these functions.



# Commercial Establishments and Third Places

Third places, or commercial establishments such as cafés, restaurants, barber shops, and hair salons—in other words, places of business where people gather for social experiences— are a treasured type of social infrastructure. Multiple interviews pointed to the value of including spaces for small, locally owned third places in developments to build authenticity, reflect local character, increase trust with residents, and grow community wealth.

As the ULI report [\*Together: Strategies for Promoting Health and Community in Privately Owned Third Places\*](#) notes, third places “have the power to provide opportunities to local residents, foster community connections, be a common ground for civic discussion, and become economic drivers—all of which directly and indirectly affect the physical, mental, and social health and well-being of community members and visitors.” The value of third places for real estate and how these spaces can be successfully developed is explored fully in *Together*.

Third places can increase a community’s ability to respond to shocks when they become trusted community facilities, transforming such spaces into places to coordinate recovery activities, supplies, and volunteers, similar to the activities of a resilience hub after climate events.

For example, after Hurricane Sandy hit New York City in 2012, the community-oriented [Rockaway Beach Surf Club](#), “a cultural event space, restaurant, and bar devoted to promoting the love of surfing, conserving the environment, and supporting its local neighborhood,” became known as a center for recovery that helped organize volunteers. The club had solar panels installed for residents to charge phones and coordinated distribution of food and supplies. In this way, third spaces that have become anchors of neighborhood culture and social gathering can become essential resilience facilities. Such spaces can often respond more quickly to a disaster than official, government-led recovery activities can, as occurred in the Rockaways after Sandy.





# Green Spaces and Recreational Areas

Parks and green spaces may be one of the first types of social infrastructure that come to mind for many people. Not only are these areas excellent opportunities for creating community spaces, they are also critical to increasing livability and can accomplish a host of co-benefits such these:

- Reduced coastal, riverine, and stormwater flooding and water quality treatment
- Urban heat reduction and air quality improvement
- Carbon sequestration
- Biodiversity preservation or enhancement
- Promotion of mental and physical health

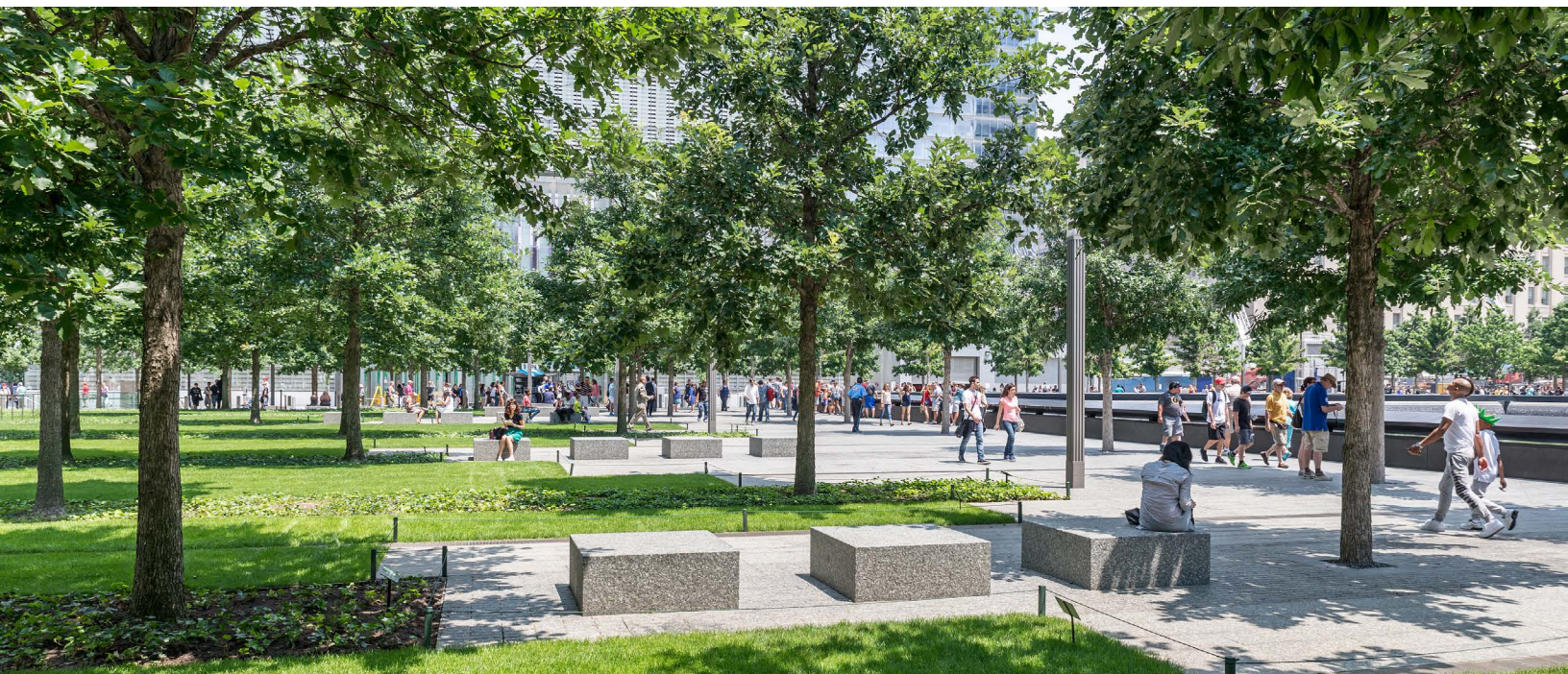
People living near green spaces are [shown to be](#) more active socially and to live longer. Parks can also provide temporary space to house displaced people after disasters and to organize recovery activities.

[Research](#) suggests that the presence of high-quality urban green spaces has a range of positive effects on social networks and cohesion by providing space for diverse kinds of social occasions and interactions, from barbecues to volleyball meetups.

These interactions can engender feelings of community and belonging and can boost health outcomes. [For example](#), parents' perceived level of neighborhood cohesion is positively influenced by the presence of playgrounds and their child's amount of outdoor play.



What constitutes a high-quality park? ULI's report *Five Characteristics of High-Quality Parks* notes that physical condition, accessibility, positive user experiences, community relevance, and adaptability determine a park's overall quality.





The role of parks as irreplaceable community-builders was highlighted even more during the COVID-19 pandemic, as they became some of the safest places to gather and decrease social isolation.

Community gardens in particular are an example of green spaces that are highly correlated with building community and social cohesion, given the highly collaborative nature of gardening collectively. As a unique benefit, community gardens have [often been cited](#) as a key means of integrating [immigrants and refugees](#) into new places because they provide a sense of place, opportunities for connecting with existing residents, stress reduction, and the chance to maintain a sense of cultural identity through cultivation of culturally relevant food or ornamental plants.

Parks and green spaces can also create room in cities for small and large [green infrastructure](#)—such as bioswales, tree plantings, restored wetlands, or natural protective landscape features such as [dunes](#)—that can help absorb rainwater, create buffers from coastal flooding, and provide natural cooling.

Parks, open spaces, and even buildings can be adapted to handle extreme rain while remaining recreational resources and enhancing the value of developments, as documented in this [handbook of solutions](#) from the Cloudburst Infrastructure Workshop report conducted by ULI's Urban Resilience Program and ULI New York for the NYC Housing Authority.

Not all communities have equal access to high-quality parks and their benefits; low-income and BIPOC communities are less likely to be within walking distance of one. Learn more from the [10 Minute Walk Campaign](#).



Parks, open spaces, and even buildings can be adapted to handle extreme rain while remaining recreational resources and enhancing the value of developments, as documented in this [handbook of solutions](#) from the Cloudburst Infrastructure Workshop conducted by ULI's Urban Resilience program and ULI New York for the NYC Housing Authority.

**“Parks are a space where communities can come together around shared goals and interests. The community built in those spaces, whether a community garden, more formal activities like meetings, annual events—these opportunities to interact, have shared goals, and physically manifest those values—are often an opportunity to build ties between neighbors. The social capita—the relationships built from being in a neutral space—is what will knit together the community.”**

—Ayanna Williams, director of community and environmental resilience, National Recreation and Park Association

## Project Profile

### Green Spaces: Howard Hughes Corporation's Master-Planned Communities, United States



The Howard Hughes Corporation's master-planned communities include enough parks and green spaces that every household has one within a quarter mile, totaling more than 270 parks and 14,000 acres of preserved areas. Programming is key to engaging residents. *(Howard Hughes Corporation)*

Howard Hughes has integrated parks and open space as a core component of its development strategy, given the proven boosts to residents' quality of life. The company attributes much of the success of its well-known master-planned communities, such as Bridgeland, Woodlands, and Summerlin, to the intentional blend of green spaces, trail networks, natural lands, and playgrounds in each development.

Each community includes enough parks that every household has one within a quarter mile. In total, the company has developed more than 270 parks and preserved 14,000 acres of green space. In the Woodlands development north of Houston, fully 28 percent of the land is permanent open space protected in perpetuity.

The company sees these social infrastructure spaces as essential features of its ESG strategy and as part of creating attractive, livable places. Interviews noted the company's successes in securing the world's first LEED for Neighborhood Development pre-certification for a master-planned community and top rankings in the best-selling communities in the United States.

Programming is key to success of this social infrastructure: "People are coming here because of the green space. . . . We don't just build it; we program it, activate it, and continually check it to make sure it meets needs of the community," according to Kelly Dietrich, director of planning and development at The Woodlands. "We would describe



it as placemaking. It brings the community together and makes the space more desirable. Being part of a bigger fabric matters, and this placemaking aspect is critical to our vision, ideology, and implementation strategy,” according to Gautami Palanki, senior vice president of ESG strategy.

Palanki sees these parks as an important climate resilience strategy both physically—trees, parks, and permanent forest preserves help cool off the developments, as well as integrate stormwater management areas that look like attractive water features—and socially. Palanki added, “Resilience to climate is as much emotional as it is physical. To be prepared, and aware, and have the tools to navigate a risk are equally important. In terms of social infrastructure, it’s not just about the physical infrastructure of gathering spaces. Being part of community helps us communicate.”

Investing in park space is a winning strategy for the company, as it has found multiple types of returns and co-benefits. “If you look at our price per acre, there is a premium. We are on [the] list for highest sales and seeing the value of parks come through in price. These spaces matter to real estate because it’s about where people want to be: stay, play, pay in communities. It helps with local economies as well.”



The Howard Hughes Corporation’s master-planned communities include enough parks and green spaces that every household has one within a quarter mile, totaling more than 270 parks and 14,000 acres of preserved areas. Programming is key to engaging residents. *(Howard Hughes Corporation)*

# Interstitial Spaces and Transit

Weaving social infrastructure into the design and arrangement of buildings and the urban realm can create opportunities for gathering points. Long-appreciated urban spaces—such as plazas, courtyards, sitting areas, human-oriented and walkable street networks, or even building lobbies or retail atriums,— can provide venues for social interactions ranging from concerts, performances, and other cultural events to enjoying outdoor dining, bumping into neighbors, or simply sitting and talking with friends.

The features help create lively, vibrant urban places that have commanded rent and sale premiums in recent years, and they can be integrated into real estate placemaking strategies and private development. They also help build feelings of community, trust, and belonging among residents, developing social cohesion and community resilience.

Even simple design features can help create “micro-open spaces” that serve as social infrastructure and support community, such as

- Front porches or stoops
- Shared building entrances
- Strategically placed benches

These outdoor spaces provide numerous opportunities for co-benefits such as stormwater management, urban heat island reduction, shelter from extreme temperatures, and promotion of biodiversity and ecosystem services, as can be found in JDS Development Group’s First Avenue Water Plaza in New York City.

Forward-looking developers such as [JBG SMITH](#) implement strategies to support attractive, authentic public realms (also known as placemaking) because, as noted on the [website](#), “neighborhoods with a distinctive sense of ‘place’ outperform all others. They drive sales velocity, rent growth, and economic vitality. And over time, entire submarkets can rise in value through successful placemaking.” To achieve this goal, JBG SMITH mixes multifamily buildings; commercial establishments; and anchor, specialty, and neighborhood retail markets with thoughtfully planned social infrastructure such as public areas and walkable streets.

**“In commercial or shopping areas that suffer from periodic flooding, you can create a plaza that’s a social space, a gathering place, that has tiered steps and fountains that are social amenities most of the time, but can create systems that convert into water basins and divert flooding underground, and double as a flood protection system. There’s a lot of really exciting work done by designers around the world that involves taking seriously the climate challenges we have and people’s desire to have better social gathering places.”**

—Eric Klinenberg, director of the Institute for Public Knowledge, New York University





## Pocket Neighborhoods by Unabridged Architecture

“What is a pocket neighborhood? Small-scale infill developments with multifamily housing around a shared common space. Unabridged Architecture has several pocket neighborhood projects underway on sites ranging from one-half acre to three acres [and] from six units to 18 units. These are distinct from standard apartment buildings because they place people at the center rather than vehicles; by fostering a shared sense of ownership in the common spaces; and by creating porches and landscape to establish a sense of belonging with privacy.

“Pocket neighborhoods also create clusters of housing at higher density than [do] single-family tracts, reducing the infrastructure needed to serve the same number of residents.

“Climate resilience is enhanced with porches for shading and rain protection, while ground floors are elevated 1 foot above base flood elevations to provide enhanced flood protection, and existing trees are preserved to reduce the heat island effect, and pervious paving is used near tree roots. Social, efficient, and resilient.”

—Allison H. Anderson, FAIA, LEED-AP, Founder and Principal



Aerial sketch of a 16-unit pocket neighborhood within a grove of live oak trees in Gulfport, Mississippi. (Unabridged Architecture)



## Project Profile

### Interstitial Spaces and Transit: Veridian at County Farm, Ann Arbor, Michigan



Veridian at County Farm, a mixed-income, net zero, Living Community Challenge neighborhood, features homes facing central gathering and green spaces, native plant-lined walking lanes, and a restored barn and retail center for events and socializing. (THRIVE Collaborative)

Developed by THRIVE Collaborative, a building, development, design, and consulting firm based in Detroit and Ann Arbor, [Veridian at County Farm](#) aims to be a model for low-carbon, socially focused, ecologically regenerative, and healthy living.

THRIVE is transforming the site of a closed youth prison facility in Ann Arbor into a mixed-income, Living Community Challenge neighborhood, which is an expansion of the stringent Living Building Challenge from the International Living Future Institute. One-third of the housing units will be developed in partnership with local nonprofit Avalon Housing for tenants earning up to 60 percent of area median income, with more than half reserved for tenants earning up to 30 percent of the area median income. Supportive services will also be provided.

The architecture and planning firm Union Studio designed the community so it could site buildings

around central gathering and green spaces, including bioswales and community gardens. Streets are pedestrian oriented and designed in European *woonerf* style, with vehicle speeds reduced through design features and the mixing of cars, bicyclists, and pedestrians.

To encourage a sense of community, front porches face common green areas and native plant-lined



(THRIVE Collaborative)



walking lanes; garages are tucked into the rear of the homes. Homes of various price points and sizes, from 2,500-square-foot detached homes to 400-square-foot microflats. The development sits next to 130 acres of woods, trails, gardens, and playgrounds in County Farm Park, which provides generous access to nature and recreation. Community facilities include a restored barn that will be used as a gathering and event space for residents and the community at large, as well as a farm stop grocery store open to the public.

Veridian's environmental credentials are impressive. As part of targeting the Living Community Challenge, the development will be all-electric and 100 percent powered by solar energy and will have battery storage to provide additional backup power. Landscaping is viewed as a means of restoring ecology, and pathways incorporate rainfall management techniques that mimic natural hydrology and help reduce flood risk.



(THRIVE Collaborative)

Ensuring that all communities have equitable access to safe, welcoming public cultural spaces helps cultural preservation and expression while creating opportunities for resilience features in underinvested communities.

# Community Support and Development Spaces and Resilience Hubs

A diversity of high-quality community-support facilities, especially in marginalized communities, can help boost resilience. These facilities can include spaces for child care, health care, access to healthy food, economic development and workforce training centers, and more.

Within buildings, community features such as community rooms, playrooms, or other social spaces—even gyms or wellness spaces—could be considered support spaces that provide gathering points for users.

These facilities create physical space for networks of groups and organizations that provide essential services that communities need to thrive at all times. Doing so decreases social vulnerability at its source by working to reduce poverty and social inequality and by increasing health and well-being and adaptive

capacity to respond to hazard events. These facilities can also provide opportunities for community members to interact and build relationships and social cohesion. Some, like resilience hubs, can provide physical shelter during emergencies.

Investing in these spaces and helping ensure they are affordable and accessible for all communities, especially low-income and BIPOC communities, is a key climate resilience strategy.

For example, households that can reduce costs and stress by accessing affordable medical care or child care could better bear the financial and emotional costs of retrofitting homes or recovering from disasters. In addition, having more workers trained in renewable energy and other net zero strategies can raise household income and help companies meet their sustainability and ESG commitments.

## Spaces for Local Organizations

Creating physical spaces for small-scale, local, grassroots nonprofits and community-based organizations in developments creates better outcomes for community health, well-being, and social resilience than does focusing exclusively on larger national or international nonprofits. One example can be found at the [Plaza Roberto Maestas](#) project, developed for local organization [El Centro de la Raza](#) and including a space to expand the nationally recognized José Martí Child Development Center. The project also has a community plaza, a neighborhood retail and restaurant space,



(William Wright Photography)

a large multicultural community center, a commercial kitchen and event space, and more than 100 units of housing for low-income families.








Resilience hubs are a particular type of community support space. Hubs are individual buildings or spaces in buildings that serve year-round before, during, and after climate events to strengthen communities by supporting residents and coordinating resources, programs, and services. The hubs improve overall quality of life—especially for marginalized communities—according to the [Urban Sustainability Directors Network](#) (USDN). They are often located in trusted neighborhood locations,

whether community centers, recreation centers, or larger multifamily buildings. The key distinction from other community facilities is that hubs have been outfitted with hazard mitigation features to ensure continuous operations and to provide physical shelter during hazard events.

The USDN, which has published guidance for creating resilience hubs, lists five components of resilience that a hub should include, as shown in the table below.

### Components of Resilience Hubs

Resilient programming and services	Resilient structure	Resilient power	Resilient communications	Resilient operations
 <p>Offering additional services and programs that build relationships, promote community preparedness, and improve residents’ health and well-being</p>	 <p>Strengthening the resilience of the facility to ensure that it meets operational goals in all conditions</p>	 <p>Ensuring reliable backup power to the facility during a hazard event while also improving the cost-effectiveness and sustainability of operations in all three operating modes</p>	 <p>Ensuring the ability to communicate within and outside the service area during disruptions and throughout recovery</p>	 <p>Ensuring personnel and processes are in place to operate the facility in all conditions</p>

For resilient structure and power, for example, a resilience hub might include solar panels, backup battery power, and floodproofing; seismic retrofits; or enhanced air filtration to protect from wildfire smoke. However, the services and facilities resilience hubs provide in order to boost well-being, individual and collective capacity, and equity every day—such as job training, offering spaces for social events or meetings, or even building health through exercise—are just as important, if not more so, for helping communities thrive.

Critically, resilience hubs are often managed by community members or groups, with the goal of shifting power by “providing opportunities for communities to become more self-determining, socially connected, and successful before, during, and after disruptions,” as the USDN [Guide to Developing Resilience Hubs](#) emphasizes. In this aspect, hubs are important for reducing social inequity and vulnerability.

Resilience hubs are becoming part of climate-sensitive development for private buildings, such as the [Maceo May](#) project in the San Francisco area—an all-electric, multifamily development for veterans who have experienced homelessness. It has a first-floor community room linked to rooftop solar panels and a backup battery, refrigeration for storing essential medications, basic power and light (including for charging devices), and cooling for data and for wi-fi closets that are specifically circuited for the ground-floor community space.

Interviews suggest that resilience hubs provide returns on investment to the wider community in the form of reduced costs of emergency services and health care, improved access to employment for community members, enhanced access to services, and reduced carbon emissions and energy expenditure through use of energy efficiency and renewable energy.

Investment in those spaces could become an effective strategy for companies looking to build out both the environmental and social components of their ESG programs.

**“The intention behind resilience hubs is the shifting of power to ensure that community has not just a voice but ownership, codesign and co-development, and a say in operations. Procedural and distributional equity need to be embedded.”**

—Kristin Baja, director, Direct Support and Innovation, Urban Sustainability Directors Network



Maceo May in the San Francisco area will feature a first-floor community room with backup power for resident use during emergencies. (Mithun)



## Project Profile

### Community Support and Development Spaces: 63rd House, Chicago, Illinois



Blue Tin Production, an apparel cooperative, is creating a combined manufacturing headquarters and community support hub that features meeting and working areas for local community organizers, a gallery for local artists, and gardens at ground and roof level. (Studio Gang/Blue Tin Production)

Social infrastructure can be integrated into manufacturing facilities. [Blue Tin Production](#) is the first U.S. apparel manufacturing studio and design firm cooperatively owned and run by immigrant, refugee, and working-class women of color. Blue Tin works to flip the script in fashion supply chains by putting those often exploited by the fashion industry in charge.

The cooperative goes beyond building a radically ethical business model by also building long-term economic and political equity for the community. One major project underway is reducing social vulnerability in the racially diverse, working-class Chicago Lawn area by engaging with neighbors through the new headquarters.

To create “a workspace that centers physical, emotional, and mental health,” Blue Tin partnered

with leading architects Studio Gang, which was founded by [Jeanne Gang, winner of the 2022 ULI Prize for Visionaries in Urban Development](#). The cooperative purchased an abandoned 1920 post office, and Studio Gang created a concept design to [transform the structure](#)—and not just into a manufacturing facility. The renamed [63rd House](#) will be an abolitionist, net zero carbon community hub that supports Blue Tin’s mission to uproot the sweatshop system and reduce oppression throughout fashion supply chains.

Conversations that Blue Tin had with local Black and brown community organizers and young people shaped the building’s program and design. Blue Tin’s studios and offices are located at the back of the building and can accommodate tours, sewing classes, and workshops. The central area is devoted to a flexible co-working space for local organizers

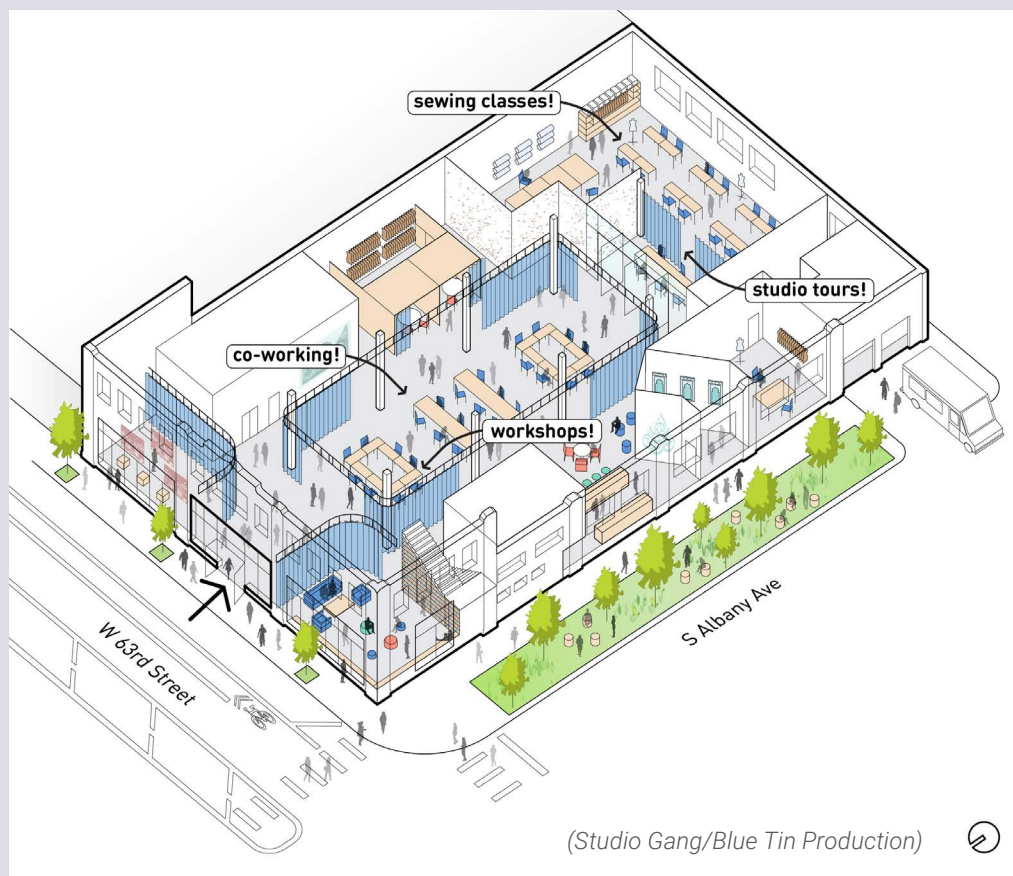
dedicated to social justice and youth after-school programs. A small library and gallery area (featuring work by local artists and by currently incarcerated people) immediately adjacent to the entrance welcome the public inside. Other planned community support features include these:

- A media space with computers, cameras, and printers
- Spaces for mental health practitioners to host clients
- A prayer and meditation room
- A small kitchen

Meant to support the cooperative's ambitious sustainability goals, this adaptive reuse project reduces emissions by minimizing new construction and is targeting Living Building Challenge certification. Extensive rooftop solar (enough to provide 100

percent of energy use) is envisioned to accompany a rooftop pollinator garden and other biodiverse vegetation at ground level; the roof also features a terrace for fashion shows, pop-up events, and other social uses. The Chicago-based Black and brown architecture collective BeeHyvve is taking the project forward from schematic design through construction.

Alissa Anderson of Studio Gang notes that "by supporting community needs and aspirations in Chicago Lawn, Blue Tin is working with their neighbors to create a grassroots infrastructure of care and safety." In [Blue Tin's words](#), "63rd House will be our embodied vision of not only centering the needs of workers in a cooperative, but [also] centering the needs of all in a hyper-policed, working-class community and, in practice, attempting to build the world we want, on our terms."





## Project Profile

### Community Support and Development Spaces: YMCA, Toronto, Ontario, Canada



Working with Mantle Developments, the YMCA of Greater Toronto is transforming its facilities into community resilience hubs with low-carbon backup power, solar panels, and battery storage, and the hubs can become community reception centers during emergencies. (YMCA of Greater Toronto and Shai Gil)

Mantle Developments, a consultancy based in Toronto and Vancouver and focused on climate adaptation and mitigation in the building, infrastructure, and construction sector, has been working with the YMCA of Greater Toronto to enhance its locations' ability to act as community resilience hubs while driving down emissions. The YMCA locations have long been known for their role in supporting everyday community well-being as recreation centers and through other community services. Adding climate resilience features can ensure that these spaces can serve as a shelter or coordination facility during and after disasters, as has been done by YMCAs in recent disasters in places including New York City, Houston, and Fort McMurray.

"For a facility to serve people in a time of need and to act as a resilience hub, the building and the community should already have a predetermined layer of trust. That trust takes time to build, and the YMCA does that organically by serving as a center of community offering employment, child care, recreation, and many other services," notes Alanna Komisar, senior adviser at Mantle Developments.

Mantle worked with the YMCA to perform a climate resilience and risk assessment for its network of 22 key locations. Mantle developed strategies at a

number of centers to add low-carbon and climate-resilient backup energy systems capable of islanding from the grid, solar panels, battery storage, and charging stations for electric vehicles. Mantle has coordinated with various government agencies to help the buildings become community reception centers during emergencies. At the LEED Gold Cooper Koo YMCA in Toronto's West Don Lands, plus in four other YMCA health and fitness centers across Greater Toronto, a high-efficiency, combined heat and power system provides round-the-clock resilience that is independent of the electricity grid while the excess heat generated is used to warm the pools and domestic water.

Adding resilience hubs like these has building-level benefits in addition to social and safety benefits for the community. According to Komisar, "This is ultimately about increasing your building and community's value from a social and economic perspective. Generally, a building is valuable when it's in demand, when people want to be there, and, more importantly, when people want to stay there long-term. Notably, people will only stay if it feels safe. A community resilience hub has the added benefit of both increasing well-being in the community and supporting strategies to adapt to our changing climate."

## Conclusion

Social infrastructure is at the core of building resilience to shocks and stresses. It can support social equity, reduce environmental and social vulnerabilities, build community assets, facilitate market growth and stability, and more—alongside its additional ecological co-benefits. Incorporating social infrastructure into development is a no-regrets strategy that demonstrates the

opportunities resilience-building can create to transform places socially and ecologically. Leading real estate companies can take this contribution even further by supporting spaces that are welcoming for everyone and that remain safe and usable year-round, thereby creating attractive, lively, unique places that generate long-term returns.





# Project Team

## Urban Land Institute

### **August Williams-Eynon**

Author, Manager, Urban Resilience

### **Lindsay Brugger**

Vice President, Urban Resilience

### **Rachel MacCleery**

Co-Executive Director, Lewis Center for Sustainability in Real Estate

### **Billy Grayson**

Executive Vice President, Centers and Initiatives

### **May Chow**

Senior Vice President, ULI Asia Pacific

### **Michelle Wong**

## Interviewees

### **Illya Azaroff**

+LAB

### **Kristin Baja**

Urban Sustainability Director's Network

### **Cristina Carlson**

Howard Hughes Corporation

### **Anita Chandra**

RAND Corporation

### **Erin Christensen Ishizaki**

Mithun

### **Kelly Dietrich**

Howard Hughes Corporation

### **Jill Dixon**

Agency Landscape + Planning

### **Clarke Gocker**

PUSH Buffalo

### **Jeff Hebert**

HR&A Advisors

### **Wendell Joseph**

Toole Design

Executive Director, ULI Singapore

### **James A. Mulligan**

Senior Editor

### **Barbara B. Hart, Publications Professionals LLC**

Manuscript Editor

### **Brandon Weil**

Art Director

### **Deanna Pineda, Muse Advertising Design**

Graphic Design

### **Dotty Kelly-Paddock**

Hau'ula Community Association

### **Eric Klinenberg**

New York University

### **Alanna Komisar**

Mantle Developments

### **Yuxiang Luo**

James Lima Planning + Design

### **Riki Nishimura**

Populous

### **Gautami Palanki**

Howard Hughes Corporation

### **Delma Palma**

New York City Housing Authority

### **Kim Phillips**

Howard Hughes Corporation

### **Ayanna Williams**

National Recreation and Park Association