

SUSTAINABLE HUDSON VALLEY

# RESILIENT PLACES: PUTTING COMMUNITY FIRST



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# RESILIENT PLACES: PUTTING COMMUNITY FIRST

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“We can try to outsource our problems to a new generation of green engineers, designers, and architects, but we will only see broad, lasting changes when the people inhabiting our communities create a vision for the future and lead the process for change.”

-- Philip Myrick, Former CEO, Project for Public Spaces

“It is easier to tame a wild idea than to push a closer-in idea farther out.”

– Alex Osborn, Creative Education Foundation

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# Invitation

## *Imagine*

You're in a public place that just feels right. It might be a main street, a neighborhood, a waterfront, a park.... Not only do the businesses and industries there seem to be doing well, but the area is visually pleasing and goods and services are conveniently located and easy to find. It's easy to walk, take public transit, bike or scooter around. There are shade trees to help beat the heat, continuous sidewalks and crosswalks in the right locations and in good repair, helpful signage and adequate lighting, and spacious, durable bus shelters with amenities like solar-powered chargers and real-time information. It has amenities such as water fountains, benches with charging-ports for your devices, small parks scattered throughout the area with picnic tables and chess boards. There are even some blueberry and raspberry bushes that are free for the picking.

This place invites everyone to enjoy the public space, whether it's to have a chat with friends or to conduct business. The street lights and chargers are solar, along with the backlighting of the community bulletin board. Every block has collection bins for recycling and compost. Most of the businesses are locally owned and operated, and reflect the cultural diversity of the community. New businesses are forming, dedicated to showcasing and promoting green energy and innovation. For example, there's a retail reuse center with a used clothing boutique, art supply exchange, and building materials warehouse, a water technology business incubator<sup>1</sup> run by the local university, and gourmet food trucks featuring great stuff from local farms.

Not so visible are design features that make the place safer and more secure during storms, floods, and heat waves, and better able to respond to emergencies and disasters. Rain gardens and bioswales help absorb flood waters. Green roofs and solar canopies provide protection from heat. Resilient design is an exciting new field in architecture and engineering that considers, first and foremost, how to future-proof every project and ensure that it provides community benefits while protecting against the impacts of climate change.

Placemaking for a Sustainable Future

Sustainability, resilience, and revitalization can all be advanced through strategies like these

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<sup>1</sup> Incubator - An organization designed to accelerate the growth and success of entrepreneurial companies through an array of business support resources and services that could include physical space, capital, coaching, common services, and networking connections.

that restore and conserve the land, water, trees, habitats, and open space near where people live, and that integrate natural features into the design of public amenities so that people and nature both thrive.

We are focusing here on districts. They are a scale for engagement that is big enough to matter yet small enough to impact. A downtown, a waterfront, a campus and its surrounding neighborhood, an industrial area, or a neighborhood that is taking charge of its future – any of these are excellent candidates for creative and resilient redevelopment.

Districts designed for resilience can be comfortable, attractive, accessible and inclusive places. The strategies in this guidebook work in any defined place where people live, work, play, create - and feel part of.

Small(ish) cities are everywhere in the Northeastern US, where we live, and beyond. Some have populations as small as 8,000 (Hudson, New York) while others are 50,000 - 100,000 (Hoboken, NJ and Hartford, CT- stomping grounds of the coauthors). We don't propose a fixed cutoff point in terms of the size of community this Guide can serve. Some of our principles and ideas have been taken from big city examples. But we are focusing on the unrecognized possibilities for smaller places, where an intervention led by citizens and neighborhood organizations can have a high impact on the community as a whole. In these places, often, there are informal relationships with public agencies that allow public-private partnerships to be created with surprising ease. As Mark Pattison, former mayor of Troy, New York, says, "If you really want a meeting with the Mayor of New York City, you can probably schedule one within six months. If you want to talk with the Mayor of Troy, you can have him on your softball team."

### Leading with Equity

Because the places with the greatest physical opportunity and highly motivated people may not be the ones with the greatest access to resources, this document is oriented toward what any small city, town or even a neighborhood can do without a huge budget. And because visible improvements can have the unintended consequences of driving up housing prices, it also includes strategies for preventing displacement and making sure the benefits are equitably shared. There are several ways to be sure that legacy residents are able to stay and prosper in the communities they've lived in for generations as well as ensuring the equitable distribution of relevant resources and benefits to residents and small business owners. These strategies can be found integrated into the case studies within each chapter and are presented more in depth in Chapter 9 - Economic and Community Development.

## Your Guide

This Guide is inspired by the EcoDistricts® movement, which has helped to revitalize major cities from Portland to Philadelphia and Boston to Austin. Our focus, however, is on the opportunities for smaller cities, towns and villages of the northeastern United States. We do this by starting with “lighter, quicker, cheaper” approaches and quick win strategies that are within the financial and technical reach of small and mid-sized urban and rural communities. These approaches can be combined<sup>2</sup> with more ambitious capital investment – say, in a commercial complex or a micro-grid -- but tangible improvements can be achieved even at the scale of a residential neighborhood.

The focus of this Guide is on steps that can be taken by a municipality, Main Street group, or a community-driven nonprofit to achieve a wide range of environmental resilience, social equity, and community development goals, with initial steps that are relatively quick and affordable.

As we are all aware, rising temperatures and extreme weather are real and urgent issues facing communities around the globe. In the United States, resilient infrastructure projects are already widespread, and only stand to increase in number. For example, more than a third of U.S. communities of more than 50,000 residents are at least partially protected by levees. And while a seawall or a levee is rarely a community-led project, the spaces on or around these vital pieces of infrastructure, and others like it, offer opportunities for placemaking and the realization of far-reaching community benefits.

As cities invest in climate adaptation infrastructure, we can match resilience strategies dealing with the built and natural environment (i.e. so-called “gray” and “green” initiatives) with a third strategy that brings people and placemaking into the process. The conversation on resilience has emphasized the importance of creating smarter infrastructure and enhancing community disaster preparedness. A resilient community also leverages its investments for broader outcomes – this is what Dr. Judith Rodin has dubbed “the resilience dividend.” Whether the goal is improved transportation infrastructure, better utility networks and civic technology investments, or sea level rise protection, putting place, and the<sup>3</sup>creation of “place capital,” at the center of our policy and planning frameworks can more effectively, and more cheaply, address multiple issues at once.

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<sup>2</sup>Project for Public Spaces, 2012

<sup>3</sup>Rodin, Judith, “The Resilience Dividend: Being Strong in a World Where Things Go Wrong,” 2014.

This integrated strategy fosters the creation of spaces that not only protect cities from environmental hazards, but also enhance the social networks so crucial to disaster recovery by, for example, looking at what neighborhood upgrades could make public spaces more livable and useful and connected, and identifying ways to tackle the root causes responsible for pre-existing vulnerabilities and climate stresses.

A primary focus of this Guide is to provide an overview of new and improved public space amenities, landscape design, resource management, and business development strategies that can be launched with limited capital budgets yet help build support for sustainable practices with results within the first year.

Part manifesto and part workbook, this Guide provides the basic definitions, strategies, tools and structure to redesign your public spaces for resilience in ways that bring a host of other benefits. It lays out a framework, and a creative process for defining the place and bringing stakeholders together to realize their vision.

The chapters that follow will outline options for innovative and resilient district development across a range of major categories -- Energy, Water, Transportation, Materials, Food and Agriculture , Arts and Amenities, and Economic and Community Development. The final chapter, Putting it all Together, focuses on bringing stakeholders together to plan, prepare, and create the vision for their district. We have striven to offer a vision for development that protects and restores the natural environment while also creating attractive, productive living environments for human beings.

# 1. STATE OF THE ART

## ESSENCE: LIVABILITY BY DESIGN

### SUMMARY



NRCS Oregon. (2015). <https://flic.kr/p/vYdvNr>

The field of urban design is making major strides in developing approaches to sustainable, resilient, and equitable development that can be replicated widely.

Each district is unique, guided by a common vision for the shared public realm that combines environmental, social and economic benefits. Some of these strategies include but are not limited to:

- Advanced energy practices including efficiency, renewable power, and “smart” systems to manage energy loads (such as shutting off electronic gadgets remotely)
- People-powered transportation supported by trails, bike lanes and cycling infrastructure, and pedestrian friendly streets
- Accessible electric vehicle (EV) charging infrastructure
- Expanded and efficient public transit service and well-designed transit facilities, stops, and stations
- Water management systems that are designed for low environmental impact by using plants to retain rainwater and also provide resistance to flooding, often referred to as green infrastructure
- Recycling and reuse capabilities
- Public features that encourage water conservation such as drinking fountains and water bottle filling stations
- Community-scaled gardens and small farms for local food production to reduce food insecurity and promote healthy eating habits
- Marketplaces that support minority-owned businesses and local entrepreneurs
- Public art that inspires and tells the story of the district’s potential and honors its history.



Street art on Brick Lane in London, England.



There are many actors in the movement towards sustainable and resilient urban design.

**EcoDistricts®** - initially a pilot neighborhood development pilot program launched in Portland, OR in 2013, focused on making neighborhoods more equitable, sustainable, and resilient has grown into a nation-wide movement engaging thousands of community development leaders in creating more inclusive and vibrant communities through an emphasis on civic engagement, affordable housing, and accessible public spaces; supporting educational opportunities as a tool for achieving broad reaching economic development goals; promoting active living and equitable health outcomes; building connections between people and places through greater mobility options with an emphasis on walking and public transit; restoring native ecosystems; and increasing efficiencies in energy use and renewable energy production, water use, land remediation and waste management. In 2016 they broadened these initiatives to create a district-scale sustainable development framework that has been adopted by over 300 cities, 40 states and 6 countries with the goal of “putting people and the planet at the center of every urban development decision.”<sup>4</sup>

**2030 Districts**<sup>5</sup> - a program of the American Institute of Architects dedicated to sharply reducing energy waste and pollution from our nation’s buildings by 2030, focusing on commercial districts where energy savings translate into business advantage. These commercial districts in urban centers often begin by benchmarking the energy that their buildings use, then bring businesses together with technical assistance providers to reduce waste by tightening up individual buildings and exploring district energy efficiency, supply and storage possibilities. The program has expanded to include a focus on reducing water consumption and transportation emissions. As of today, there are now over 1,200 member organizations in 23 participating cities. Additionally, a new feature called the “2030 Districts Network” was created to increase district collaboration across the United States. Each district must commit to meeting 50% reductions in energy, water, and transportation emissions, and currently over 1,100 organizations and 2,100 buildings have committed. Annual district reports are available from Ann Arbor, Cleveland, Erie, Philadelphia, San Francisco, Burlington, Dallas, Grand Rapids, Pittsburgh, Seattle, Cincinnati, Detroit, Ithaca, San Antonio, and Stamford. Another exciting development is the creation of the “2030 Districts Marketplace”, a promising new resource intended to “streamline the process of choosing vendors and service providers who can offer reliable products and projects”, making transformation of the built environment that much easier. The 2030 Districts Marketplace is in the final stage of development and will soon be made public. The various districts within the organization also host regular community events and workshops that

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<sup>5</sup>2030 District 2017-- *a program dedicated to sharply reducing energy waste and pollution from U.S. buildings by 2030, focusing on commercial districts where energy savings translate into cost savings.*

cater to local conservation/sustainability goals (one scheduled in Washington focuses on saltwater coastlines as a national heritage site).

**The Carbon-Neutral Cities Alliance (CNCA)** - whose members are committed to transformative change in their approaches to buildings, transportation, and energy.

- A few major US cities (New York City) are charting their courses to 100% renewable energy with targets mostly in the 2030 - 2050 range -- the sooner the better from a climate perspective.
- The communities that have actually gotten to 100% renewable are an eclectic mix: including Aspen, CO, which was a pilot project of the Department of Energy, and Greensboro, KS, which was levelled by a tornado and rebuilt itself according to green design principles. The CNCA is working to transform the City of Adelaide, Australia, into another of the world's carbon neutral cities by 2025.
- In 2021, CNCA is launching a new "Game Changer Fund" that is intended to support the development and implementation of policies that "aggressively shift" towards carbon neutrality.
- CNCA recently released its 2021 Climate Emergency Report, which enumerates critical emergency action strategies including increased focus on communication, education, collective influence, and peer learning. This is exemplified by features such as the new Climate Justice Statement, which recognizes that the "collective global history of colonization and slavery have deeply impacted policy and practice" and commits the organization to increased awareness of such deep-rooted inequalities.

**The Resilient-Sidney (NY) Initiative** is an example of the trend towards comprehensive resilience planning by cities. It includes the GreenPlain Vision Project which is a climate adaptation initiative that seeks to build the state's largest green infrastructure floodplain ecosystem, a climate-adaptation oriented comprehensive plan, and resilience-based land management zoning codes and policies.



Streetscape with Green infrastructure on Main Street in Sidney, New York. Photo by Cynthia Nikitin 2021



homes are owner-occupied. The neighborhood was cut off from downtown by major highways, with few points of access and poor connectivity.

The EcoDistrict® framework allowed for a coherent, compelling redevelopment plan that won a \$30 million grant from the U.S. Department of Housing and Urban Development to build 1,150 units of green affordable housing and improve connections between the neighborhood, public transportation facilities, and the Platte River<sup>7</sup>. The resulting development plan includes the replacement of 333 obsolete public housing units with newly constructed, energy efficient developments on and off-site throughout the neighborhood. In total, the Plan will create over 800 mixed-income units in four phases.

Key elements of the project are investment in young people and workforce development through construction of a 31,000 square foot “youth hub” for after-school activities and training which is located next to the main elementary school.<sup>8</sup>

When build-out is completed, Sun Valley will have transformed itself from a high poverty, high vacancy district to a next-generation neighborhood where people can more easily take transit to get to work, where more attractive and healthy buildings foster hope, and where equitable economic development is more easily achieved. It will house 3,000 residents, create 300 jobs, and create new or enhance existing neighborhood services. The project aims to become a model for community justice and transformation.

### **Lincoln Park Coast Cultural District- Newark, New Jersey:**

Newark, New Jersey's Lincoln Park Coast Cultural District is on track to transform a four-block, low-income urban neighborhood into a green, safe, musically rich place to live and work, through the construction of environmentally friendly housing, urban agriculture and training for green jobs -- arts and cultural district. The idea grew from conversations and planning meetings with local residents, civic and business leaders and city administrators. The South Park Calvary United Presbyterian church was selected as the site for a new outdoor performance venue and urban farm because it had served as a key community anchor for the 2500 hundred residents for 160 years. Through a collaboration with Rutgers University, the Lincoln Park Coast Cultural District is building an urban farm on the former church property with a CSA program which delivers healthy fresh food to people who live, work or worship in Lincoln Park. They are also undertaking the construction of affordable housing for musicians and bringing green jobs training to neighborhood youth. The project was funded by the Kresge Foundation.

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<sup>7</sup> Ibid  
<sup>8</sup> Ibid

Obviously, creating a high-functioning and resilient district is not just a matter of deciding what to do with the physical environment, but determining who implements, controls, maintains, and decides how benefits are shared and how governance is handled. This is especially true when the district strategy includes technologies with shared benefits, such as energy demand management systems or green infrastructure. But it is every bit as important when decisions are being made about public space and lifestyle options that affect everyone in the neighborhood. This includes balancing interests – like deciding where the bike racks and EV chargers go. It also includes sensitivity to aesthetics and values - like whether solar carports or an urban farm actually fit with the neighborhood's vision for itself.

The possibilities for any resilient district arise from the existing patterns of buildings, open space, amenities, activity, and the visions of the people who care about the place. A community-driven process is key to getting your district right.

This is echoed by the international EcoDistrict® organization, which has created a protocol that can guide projects at any scale. The essential features of the protocol are:

- 3 imperatives: Equity, Resilience, and Climate Protection;
- 6 priorities: Place, Prosperity, Health and Wellness, Connectivity, Living Infrastructure, and Resource Regeneration
- 3 implementation phases: Formation, Roadmap, and Performance.

The EcoDistricts® movement supports real community transformation by first establishing a framework of goals that matter; and they call for processes designed to foster accountability and continuous learning.

We conclude this chapter with some questions to guide initial thinking on where and how a potential resilient district might be formed.



# GUIDING QUESTIONS FOR CONSIDERING THE FEASIBILITY OF A RESILIENT PLACES INITIATIVE



- What institutions in the community are working to address some of these issues as part of their mission and purpose -- or could be? How can they be brought to the table?
- Who else needs to be involved in the planning and organization of a resilient district to make sure the idea is well received and there are many hands to share the work?
- How can these actors come together to form a meaningful partnership?

## 2. THE PLACE: LAND USE, BUILDINGS, INFRASTRUCTURE

### ESSENCE: PLACEMAKING<sup>10</sup>

— “ —

*“Placemaking is turning a place you can’t wait to get through, into one you never want to leave.”*

Project for Public Spaces, 2012

— ” —

### SUMMARY

Without a plan to make the whole greater than that sum of the parts, neighborhoods don't reach their potential to attract and empower people. The *Project for Public Spaces* notes that great spaces work in at least four dimensions:

- *Uses and Activities* – what people do, from living and working to attending events and participating in programs and activities, to outdoor recreation that attract a broad cross-section of the community.
- *Sociability* – promoted by benches and picnic tables, walking trails and parks to create spaces for social interaction and to encourage stewardship and volunteering.
- *Access and Linkages* – including access to healthy food, transit, and nature, and linkages among neighborhoods, transportation routes, employment and retail centers.
- *Comfort and Image* – an attractive and welcoming place that is well maintained and welcoming to all, with amenities and public art that make it safe, comfortable, and enjoyable to spend time in.

As an initial focus for delineating a resilient district, land use has many dimensions. It includes building form, use, and retrofit, open space protection and the *working landscape*<sup>11</sup> that is both protected and utilized.



"People Listen to Fred Kent of Project for Public Spaces Speak at PlacePOP Crowdfunding Event in East Lansing to Support Art in the Alleys October 2015" by Michigan Municipal League (MML)

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<sup>10</sup> Placemaking - Building communities around places, inspiring people to collectively reimagine public spaces as the heart of every community

<sup>11</sup> Cannavò, P. F. (2007). *The working landscape: Founding, preservation, and the politics of place*. Cambridge, MA: MIT Press.

A working landscape might include a park with a performance space, a community garden, commercial greenhouse, or sculpture park. It could also be a warehouse district with green spaces that serve as pocket parks or are re-planted with trees. Parklets are a massively creative way to “repurpose part of the street next to the sidewalk into a public space for people.”<sup>12</sup>

Land use may well include cleaning up and reusing damaged brownfields and repurposing spaces like oversized parking lots that were created in a more car-centric era. In previously industrial sites, it may refer to removing soil poisoned by lead or other toxic materials that have leached through the soil or into the groundwater.

What makes land use a good starting point for a district initiative is the opportunity to see the landscape as a whole, and take a fresh look at the diverse and numerous tracts of land that could be revitalized.

## CASE STUDIES

The City of Kingston, New York’s first capital, is comprised of three distinct and geographically defined districts: Uptown, a commercial and retail area and site of the County seat; Rondout, a historic waterfront district named after a creek running into the Hudson River; and Midtown, a residential and small commercial corridor where the city’s civic anchors - City Hall, the Library, a performing art center, two hospitals and the High School - are located. The functional and physical disconnection of these districts from one another has contributed to the ongoing economic difficulties and social problems facing the City.



Broadway Joe's in Kingston, New York. Photo by MattBritt00

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<sup>12</sup>San Francisco Parklet Manual, p.3.

Early in Sustainable Hudson Valley's history, we talked up the Broadway Corridor in Kingston as a "Green Trail" unifying these three districts. The Kingston Land Trust developed this idea into a full green-line of networked pedestrian and bike paths connecting to the Hudson River, the New York Thruway, and an inter-state bus station that serves travelers to and from New York City and Albany. In partnership with Ulster County, they are well along the path to realizing that vision. As progress is made in creating the trails, creative initiatives have been made to use that connectivity to enhance community life and economy: a monthly arts walk, a Night Market on the waterfront, and cycling infrastructure have been created by local nonprofits in partnership with the City. Noteworthy is the work of Healthy Kingston for Kids, a four year project to create safe routes for walking and biking to school and encourage kids to get outdoors.

Numerous adaptive reuse projects have transformed old industrial buildings into multi-family residential complexes, some dedicated to artist housing, demonstration of energy innovations, and other public purposes. These strategies have unified the three historic neighborhoods, aided by the strong citywide working relationships of the sponsoring organizations. The core of Kingston has never been named an EcoDistrict®, but it is evolving into just that.

Sustainable land use has been designed into the City's comprehensive plan, a waterfront revitalization plan, and an urban agriculture strategy (more later on that!). To go beyond "sustainable" into "innovative," many agencies have worked together to identify opportunities for synergistic collaboration. RUPCO, a regional community development organization, renovated a number of historic properties with a focus on artists' housing including the Kirkland Hotel in Uptown and the Lace Mill in Midtown and the new net zero Energy Square. Working with these anchors and the city's many



Thomas, S. (2009). <https://www.flickr.com/photos/spencertomas/4152851724>

artists gave rise to an Arts District which overlays the three fragments and helps tie them together. This, in turn, supports events and marketplaces such as a huge annual “Made in Kingston” marketplace and an annual O+ arts festival. These ingredients provide the basis for a fabulous district strategy that connects the neighborhoods and benefits them all.

Another element in Kingston’s ecosystem of opportunities is food. Kingston is home to one of the region’s finest farmers’ markets. This small city has become a magnet for food producers and consumers thanks to the appetites of artists, knowledge workers, government employees, and second homeowners for a gourmet restaurant scene. This trend was supported by a vibrant and sophisticated farm preservation and food-economy movement in the area - including a growers’ association and “Farm Hub” project investing in farms and farmers.

The food- and farm-centric climate in Kingston led a group of young entrepreneurs to take an even bigger leap and create the South Pine Street Teaching Farm. Inspired by the more mature Poughkeepsie Farm Project housed on Vassar College land, this urban food center has the capacity to train farmers as well.



Students enjoying their harvest.

Buffalo, NY’s **Green Code** is an extensive piece of city-wide policy that is primarily focused on reforming outdated zoning codes (and their problematic results). One of the most significant parts of the policy is its emphasis on multi-use development. This allows communities to become more compact and increase the accessibility to amenities. The result is that people do not have to travel as far (minimizing use of cars) to fulfill their daily needs. The policy also introduces affordable housing requirements in new developments as an effort to reduce gentrification and displacement of low income individuals. Other important reforms include the limitation on space used for parking lots (and the omission of parking requirements for new developments) to deemphasize car-centric city planning. Buffalo’s Green Code is a valuable example of foundational policy that supports sustainable and equitable urban design.



## ACTIONS:

- Look for an easy-to-define (and geographically self-contained) area with specific parameters in terms of a neighborhood, topo or geographic features, or potential land use e.g. A waterfront, a historic neighborhood, a warehouse district, a Main Street, a park
- Hold an asset mapping event: what's cool in our community and how could it contribute more to quality of life? What are the problems we need to address or challenges we need to solve?
- Identify zoning barriers to land use that prevent the highest best use of a building or commercial corridor in order to maximize the value and use of these assets and attract people to them, and revise them to better accommodate innovative uses e.g. permit flower boxes, outdoor displays, temporary street closings for events, and sidewalk cafes
- As part of the zoning review, conduct a “building resiliency assessment”<sup>13</sup> to learn about vulnerabilities in floods and other emergencies: e.g. is essential equipment housed in basements that are at risk in floods.
- Create a community garden plot or a butterfly garden/ backyard habitat workshop
- Create parklets -- small or even tiny gathering places designed to transform small patches of underused land, for example in commercial areas or along pedestrian and bike routes or in under-used parking spaces and parking lot
- Enliven public spaces with art such as sculpture and murals that honor the history of and tells a story about the people that once lived there and those that do now
- Look at ways to implement policies to make the area more comfortable and resilient in a changing climate, such as introducing rain gardens, shade trees or awnings, green roofs, etc.



Everson, B. (2009). <https://flic.kr/p/6icjMa>

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<sup>13</sup> Thomas Chase and Lauren Baumann (2016), “Multifamily Building Resiliency Audits.” Boston: New Ecology ([www.newecology.org](http://www.newecology.org)).

# GUIDING QUESTIONS FOR EVALUATING THE POTENTIAL OF YOUR DISTRICT AS A "PLACE"



- How do the people in and around the area define its character?
- What is comfortable and attractive about this place that could be enhanced as an asset?
- What are the challenges to living in, working in, and getting around this place?
- Where are some of the potential losses that can be recovered in order to make the place more livable, comfortable, and attractive - for example:

## Energy

- i.e. poorly insulated buildings and windows, aging water and sewer systems, or payments to utility companies located outside of the region

## People

- i.e. residents who must commute out of the district to work because they can't find a job here due to urban sprawl, loss of industry or due to a lack of affordable places to live

## Income

- i.e. outsourced services, retail leakage, vacant buildings and lots
- What are at least ten physical places (civic, physical, cultural) that could anchor a district-wide effort? How can these places be made more habitable, attractive, and interesting?
  - i.e. benches, water fountains, paint jobs, shade trees, re-use of vacant property

### 3. TRANSPORTATION AND MOBILITY

#### ESSENCE: STREETS AS PUBLIC SPACES TO ACHIEVE MULTIPLE COMMUNITY OUTCOMES

##### SUMMARY

Streets do more than move traffic; they determine how well a town or city functions for its residents; whom and what they connect; whom and what land uses they separate from one another; and how the built form is impacted. When we begin to question the current role of streets as primarily serving single occupancy vehicles, we can begin to expand transportation choices and reclaim the public spaces in and around streets and roads. This begins when we expand the options for mobility to include more than cars. Complete Streets is a planning and policy approach to make streets work for all users – public transportation, pedestrians, bicycles and other wheelies, people with disabilities, as well as motorists. It includes more mobility options and creatively designed streetscape so the street works as a place for human uses and mobility, with cars as an option rather than an imperative<sup>14</sup>. A community with a Complete Streets law in place could anchor a district by designing streets to maximize bike and pedestrian access and safety, to better accommodate transit riders, and to optimize water-based transport where feasible.



Pearl St Boulder Colorado. Photo by carpathiar

##### CASE STUDIES

###### Seaholm - Austin, Texas:

The Seaholm District, located in Austin, Texas, is an 85-acre redevelopment area situated on the south-western edge of downtown, located on Lady Bird Lake. Formerly an industrial area, Seaholm covers 22 city blocks: nine blocks are city owned and eight are currently under redevelopment by the City of Austin in accordance with a Master Plan adopted in 1996.<sup>15</sup>

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<sup>14</sup>Portland Sustainability Institute, p. 25.

<sup>15</sup>City of Austin, 2017

Seaholm already boasts benches with solar-powered chargers, local food production initiatives, electric vehicle charging infrastructure, an interactive sustainability dashboard at the new Central Library, and health and fitness programs for residents.

These initiatives engage citizens to be physically active, use clean energy, take notice of sustainable development progress, and educate a broad cross-section of the community as to the value and importance of these initiatives to the City. Seaholm also houses a new multi-modal transportation network including a Metro Rail stop



Lance Armstrong Bikeway, Texas. Photo by Rails-to-Trails Conservancy

that opened in 2014, bus transit, bike sharing, carsharing, hike-and-bike trail connections and a five-mile cross-city route connecting with the Lance Armstrong Bikeway. With these measures in place, it is easy to get from 'A' to 'B' in the city of Austin. Residents use public transport to commute to school, work, home, and other places without the stress of traffic and expending excess fuel. This infrastructure is critical for those who cannot afford their own vehicle, or may have a disability, and encourages active transportation.

### **SoMa - Portland, Oregon:**

South of Market (SoMa), a 92-acre area around Portland State University, became an EcoDistrict® pilot in 2009. One of the major goals of SoMa is to achieve carbon neutrality in the city by 2040. One major problem that was tackled by SoMA was pollution from public transportation. The Green Line Light Rail and Broadway Cycle Track were developed in order to create more efficient, accessible, and cleaner transportation options.

A major actor of this pilot EcoDistrict® is Portland State University (PSU). PSU operates a Sustainability Institute that has been involved with research supporting community change. The University has used its influence as a convener for the 90-block District, of which it is the majority landowner. More than one major contributor was needed to create a successful District, however.

Through its cross-sector leadership, the University was able to fund many of these initiatives by means of public-private partnerships.

The framework strategies for the SoMa EcoDistrict® include:

- Creating destinations and gathering Places
- Improving connectivity to and between these destinations
- Green infrastructure
- District utilities
- Existing building retrofits



Capstone hosts ReUse Fair for SoMa EcoDistrict by Sustainability at Portland State University

After the original pilot, several other projects were initiated that follow this framework including: the “Adopt a Block” initiative, park redesign, summer concert series, ReUse Fair, and Kilowatt Crackdown.

The SoMa EcoDistrict® has also become a model for other EcoDistricts® in Portland, such as: South Waterfront, Foster Green, Gateway, and Lloyd.

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*“There have been significant positive outcomes for the communities and an invaluable strengthening of the EcoDistricts® model: each pilot neighborhood has found a voice and identity through EcoDistricts® that resonates with residents and fosters a new relationship with municipal leadership and real estate developers.”*

(EcoDistricts®, 2015)

— ” —

A successful and thriving resilient district initiative is the **Better Block**<sup>16</sup>. Formed in the Oak Cliff neighborhood of Dallas, Texas, the mission of Better Block is to promote healthy and vibrant neighborhoods. To accomplish this, they transform streets with pop-up galleries, bike infrastructure, and fast-tracked neighborhood spruce-ups. This approach is all about bringing people together with a big vision and tight deadline, creating healthy pressure to get things done.

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<sup>16</sup>Better Block Foundation, 2016





*“They commandeered two of the street’s lanes, painting a bike lane in one, and adding flower boxes and sidewalk café seating in the other. A set-design company loaned furniture, and a hardware store loaned potted shrubs to buffer the new “patio” from car traffic. Friends opened pop-up shops—temporary retail stores—and a café in vacant storefronts. A couple of buddies strung a giant strand of Craigslist-sourced Christmas lights across the street.”<sup>17</sup>*



With an initial budget of less than \$1,000, a city block in South Dallas was transformed with people power and scavenged goods. Many ideas for the Better Block project were tested during certain events before being permanently put into place. Better Block is an innovative way to create and spontaneously try new ideas in urban places. The Better Block Foundation has perfected the art of fast-track, small-scale revitalization blitzes and tools like the “block in a box” kit, a compact kit of “event making elements”, including places to sit, string lights, shade, and play spaces. The MLK Blvd Food Park is another Better Block project which will create a safe, colorful, and vibrant space in South Dallas that will provide community space, an incubator for culinary entrepreneurs, and serve as a testing ground for policy change surrounding mobile food vending options.

Established citizen organizations are often key allies and potential organizers, from transit advocates to bike clubs. In some communities they have been working for years to make transportation better; they know the layout and people of the community well. For example, the **Mid Hudson Bicycle Club’s** mission is to enhance and promote enjoyment of cycling in the Hudson Valley-- and they are open to all levels of riders. The club offers many perks, such as group rides to help introduce new riders to biking in the area and even complementary insurance. Organizations like the Mid Hudson Bicycle Club are important because they introduce a clean mode of mobility connecting a large geographic area that has traditionally relied primarily on cars. Bicycle Clubs (or similar organizations) are an excellent tool for supporting residents in a transition away from cars. They can provide the resources to help make such a change less intimidating and more convenient through programs like the “recycle a bicycle” program in Missoula, MT which provides free bicycles to the youth who repair them, and low to no cost bike rentals for low income

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<sup>17</sup> Better Block Foundation. (2016). About | the better block. Retrieved January 25, 2017, from <http://betterblock.org/about/>

residents.

This is especially important because although it may not seem immediately obvious, cycling is very male-dominated and white-dominated, and biking infrastructure is much more prevalent in wealthy white neighborhoods than in minority ones.

**Citizens for Regional Transit (CRT)** is a nonprofit located in Buffalo, NY whose mission is centered around public transportation, specifically expanding metro rail (the world's greenest mass transit). CRT relies on citizen involvement and education to advocate for expansion and improvement of bus and rail transit throughout the Buffalo/Niagara region (though it envisions projects that extend far beyond this scope, even pushing for international light rail). Organizations such as CRT are very important in giving communities a voice on matters of local transportation, while also providing much-needed education about public transit. CRT tackles issues of sustainability, politics of mobility, accessibility, and social/environmental justice. Transportation planning is big money, long range, high risk, and faces challenges of liability and complexity. Still there is an art to identifying the small changes that are ready to happen, and the allies who can be brought together to build momentum for change. Groups such as this help remind us that sustainable mobility in the future will rely first and foremost on mass public transit, not widespread use of private electric vehicles. A community-led group that focuses on expanding public transit and voicing transit-related concerns would be a valuable partner in creating an equitable and sustainable district, as would allies from the public health and safety community.



Indigo Park in Dorchester, Massachusetts. Photo courtesy of Bill Gaylord 2022

**The Fairmont Indigo CDC Collaborative**, located in Dorchester, Massachusetts, is dedicated to building thriving, diverse neighborhoods. The Collaborative works in low and middle income neighborhoods, building low-income and mixed-income housing, creating development opportunities, and promoting opportunities for

resident and youth leadership. They are also working to bring more affordable public transit options to the Fairmont Corridor. The Collaborative's work has resulted in the appropriation of \$200 million for transit equity, the construction of 4 new stops by the MBTA along the Fairmont Corridor, reduced Fairmount line fares, and free transfers to the subway and buses. In terms of ecodistricts, the Collaborative is an example of a valuable source of community investment that is incorporating public transit in its mission of creating more equitable and sustainable neighborhoods.

## ACTIONS:

- Taking a fresh look at streets in the context of the mobility needs of the whole population (not just commuters) can open up the possibilities for creating a district that balances the mobility needs of all users by exploring the wide range of ways that streets and their surroundings can be outfitted as multi-use places. Methods are diverse, including redesigning transportation corridors, introducing new amenities, and mobility services. For example:
- Redesigning the streets to support use by many mobility modes, not only automobiles through the introduction of<sup>18</sup>
  - Traffic calming measures
  - Route adaptations including bike lanes, traffic signals, and signs
- Bike friendly community projects to increase use and visibility of bikes, including education of cyclists
- Bike maps depicting paths, location of bike racks, and sightseeing routes
- Place maps depicting key destinations in the community and the routes people take to get there
- Pedestrian and cyclist amenities e.g. benches and tables with



Dedicated bike lanes in Kingston, New York. Printed with permission from the City of Kingston

<sup>18</sup> Traffic Calming - strategies to make motorists slow down and pay more attention to pedestrians, cyclists, etc.

device charging capabilities, water fountains, and shelters, especially near bus stops, Park & Rides, and train connections

- Trail and bikeway system development
- Lending and rental services for bikes, scooters, kayaks
- Pedicabs
- EV charging infrastructure at commercial centers, tourist attractions, and workplaces
- BRT or dedicated bus lanes

# GUIDING QUESTIONS FOR TRANSPORTATION PLANNING



- Where in the community are there opportunities for increasing walking, cycling, paddling, skateboarding and other non-motorized forms of mobility for transportation and recreation in the district? What other amenities or improvements would encourage people to take advantage of those opportunities as part of a placemaking strategy?
- How can people be incentivized to walk, bike, skate, and even paddle to local businesses? How can the businesses work together to achieve this goal while supporting their business goals?
- How can the design of our streets be enhanced to facilitate more flexible use of roadway space? What supporting policies will help this to happen?
- What are the key destinations in the community? How can they be better connected to one another?

## 4. ENERGY

### ESSENCE: LOCAL POWER

#### SUMMARY

Energy security is important for public safety, affordability, and local control. The vulnerability of our municipal energy grids and systems has become all too clear. The 2020-21 winter storms that debilitated major cities across Texas are a clear demonstration of that. Electricity is no longer an amenity we get from the power company without thinking about it. People within cities, towns, villages, as well as residents, businesses, and institutional leaders are increasingly thinking strategically about where their energy comes from and how it is produced and distributed. Clean, distributed renewable energy is becoming much more affordable for consumers and is in high demand. This trend is likely to accelerate as energy storage technologies like large batteries and fuel cells become mainstream in the next few years, along with electric vehicles, lawn mowers, and portable charging devices of all kinds.

Local energy planning makes it possible to maximize opportunities for clean, renewable power from individual rooftops to public spaces. Today, it is possible for a business to even make money by selling its excess power to other businesses that need it. In New York especially, several new business models also allow communities to step into the power production, purchasing, and distribution game. One is community shared solar, which enables multiple customers to pool their resources (co-op style). Another is community choice aggregation, which gives municipalities the option to source electricity from clean sources on behalf of their residents and businesses.

Energy supply is not just about having enough. It's about secure supply even when there is a breakdown in the grid. For example, local electric power supply is more resilient if it comes from multiple sources that are distributed to multiple locations, is not entirely dependent on coal or fossil fuels, (for example, if it includes some solar or hydro power), and if it is combined with some amount of storage via batteries or fuel cells. Large commercial districts, institutions like hospitals and universities, and apartment complexes are beginning to create micro-grids - power supply systems that can be separated from the grid in an emergency.



Energy efficiency is more easily achieved in these types of areas because of the potential for pooling large numbers of users and effectively allocating their energy supply for use at peak times and conserving it at others. While these are complex options, it is valuable just to identify opportunities for locally controlling power that is accessible when the grid is down.

The use of electricity to enhance public spaces can include solar street lighting, ground-mounted solar arrays, charging infrastructure, and solar shingles that are integrated into building structures. Geothermal energy and combined heat and power are also applicable at the district scale.<sup>19</sup>

## CASE STUDIES

Stamford, CT created one of the first **2030 Districts** using a model developed by the American Institute of Architects. Architecture 2030 is a push for sharp improvements in the energy-efficiency of buildings, because the built environment is one of our nation's biggest sources of carbon pollution (along with transportation). 2030 Districts begin by helping commercial building owners get a handle on how much energy they use and where they could save, then working toward measurable improvements, pooling lessons learned, and tying the economic benefits to the district as a whole. 12 million square feet of commercial real estate has been



Stamford, Connecticut financial district

committed to date. Stamford's 2030 District's program came to life as a partnership between the Business Council of Fairfield County and the Connecticut Fund for the Environment (CFE). After working with the business community to define the District and build buy-in, they began with building energy measurement and upgrades -- then used this success as a foundation for other projects such as a Business Council for resiliency and emergency preparedness, a micro-grid proposal, and a healthy buildings initiative. Most recently, Stamford 2030 collaborated with a local Early College Studies program for high school students to study ecosystems, climate change, and sustainable development.

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<sup>19</sup> Geothermal open loop = "An open loop system is connected directly to a ground water source such as a well or pond and directly pumps the water into a building to the heat pump unit where it is used for heating and cooling. There are several ways that open loop geothermal heat systems can dispose of water." (GeoThermalGenius, 2014)

A district can also be an ideal unit of service delivery for home energy efficiency and renewable energy upgrades, as the Boston-based **Codman Square Neighborhood Development Corporation (CSNDC)** demonstrates. The CSNDC is committed to conserving energy in their properties and to helping residents conserve energy and related expenses in their homes. In 2013, CSNDC began offering energy retrofit education and information and referring qualified income residents directly to Action for Boston Community Development (ABCD), the state's income-qualified energy assessment and weatherization program, or Mass Save. In 2018, they partnered with All In Energy, a 501(c)3 nonprofit whose mission is to advance an inclusive clean energy economy, including underserved communities. As a result of this partnership, in 2019, All In Energy educated 150 residents, conducted 50 energy assessments, and completed 14 retrofits.

CSNDC also supports energy efficiency for local businesses. In 2015, they partnered with Lime Energy to lower the energy costs of small businesses, equip them with new efficiency technologies, and improve their financial position. Since July 2018, 35 energy assessments have been conducted in businesses ranging from restaurants and supermarkets to car shops and beauty supply stores. Energy efficiency improvements have included such items as aerators to reduce hot water consumption, LED lights, and auto-off light switches to reduce electrical use.

In 2018-19, CSNDC enrolled 10 of these energy efficiency partner businesses in WegoWise, an online tool used to track changes in energy consumption, water use, and costs to the business. The goal is to measure the impact of the retrofits performed in small businesses for the coming five to seven years, show actual energy and dollars saved, and provide us with clear data for utility companies, the city of Boston, and policymakers. In addition, their Eco-Innovation District (EID) is working with a local partner—Resonant Energy—to get solar installed on the rooftops of local residents and businesses. Home or business owners, at reduced or no upfront costs, can either own the solar panels installed on their properties, outright, or lease their roof in exchange for a reduced electricity rate (of as much as 20%).

Near the end of 2017, CSNDC completed a massive solar installation on most of their major buildings. Solar panels now power and serve the largest six of CSNDC's 19

properties, generating clean solar power for the buildings of nearly half of their residents. It produces on average 558,000 kWh of electricity. This is the equivalent to the carbon reduction of 515 acres of full-grown forest, or the elimination of 434,661 pounds of coal burned annually.

The **Poughkeepsie Innovation District** is a proposal for transforming the core commercial section of Poughkeepsie’s downtown into a vibrant economic center anchored by new businesses in the applied arts and artisan manufacturing, satellite extensions of anchor institutions including companies and cultural institutions, and mixed-income housing. Designed as a walkable and transit-oriented neighborhood, the innovation district aims to reverse the City’s economic decline by dramatically increasing public and private investment within a concentrated area and generating far-reaching benefits for current and future residents.<sup>20</sup>

Key actions for creating the Innovation District include: revision of the city’s zoning code to maximize opportunities for high density mixed-use and pedestrian-friendly transit-oriented development within the PID; redeveloping surface parking lots and determining the appropriate amount and pricing of downtown parking; the preservation of Main Street’s historic character; improving education and workforce development opportunities; infrastructure improvements and transportation policies that enhance multi-modal access and connectivity to the Poughkeepsie Innovation District; and retaining and enhancing an inclusive and diverse population within the Poughkeepsie Innovation District by stimulating the development of mixed-income housing. Tax revenue will be funneled into social services and affordable housing initiatives to ensure that pressures of gentrification do not leave some residents behind in poverty.

The Innovation District has become a proving ground for innovative technologies as well. **Uncharted Power**, a power company based in Harlem, NY, is undertaking a \$2 million pilot project in Poughkeepsie’s proposed Innovation District as an early action step. Their MORE (Motion-based, Off-grid, Renewable Energy) technology transforms anything that moves into a source of renewable, convenient power through embedded micro generation

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<sup>20</sup> the area between the Route 44/55 arterials on the north and south, and between Columbus Drive and Hamilton Street on the west and east POUGHKEEPSIE INNOVATION DISTRICT: POLICY FRAMEWORK- Draft 2018 page 4

technology which harnesses kinetic energy to power micro-grids for communities, large facilities, etc. The company plans to embed hardware into the sidewalks throughout the City's Innovation District to document pedestrian movement, transmit data about available parking spaces, underground pipes needing repair, and serve as a conduit for broadband service.

## ACTIONS

- Benchmark the current energy use by the District's major buildings and bring business and institutional owners together to figure out ways of reducing the energy load and cost.
- Organize group purchase opportunities for energy-efficiency products and services that lots of people may be interested in such as insulation, heat pumps or high efficiency lights -- including emergency needs like solar phone chargers; following the model in use on the islands off the Maine Coast every year with Weatherization Week.
- Change streetlights and other public lighting to LED or solar, checking for a healthy light frequency.
- Create a solar buyer's group for the municipality, business district and/or entire neighborhood, or tap into an existing Solarize program.
- Create a neighborhood energy challenge campaign and share lessons learned about motivating ourselves & others
- Conduct an EASE Assessment to plan for energy security and resilience (See Appendices).
- When you have done all the easy stuff, consider where a major investment such as a district energy system or micro-grid might be useful and do-able
- Encourage your municipality to upgrade all of its fleet of vehicles and buses to electric.
- Build solar parking canopies in parking lots which, if not connected to the local grid, provide a source of power during an outage.



# GUIDING QUESTIONS FOR LOCAL ENERGY PLANNING



- How can members of our district work together to reduce energy demand and manage, pool, and leverage our energy resources as a foundation for a self-sufficient and secure district -- for example, by establishing a community solar farm on a commercial roof, parking lot or brownfield in or near the area?
- What economies of scale might be possible through group purchasing?
- How can district renewable energy installations be planned and sited with the community to provide for backup power in emergencies?
- Are there intensive energy users, such as businesses and institutions, that can become anchor users of demand management services that benefit the entire district?
- Where are the best sites for potential clean energy projects that can harmonize with the overall goals and shared community values for the district?
- What are the community's energy service needs currently? What are the community's emergency energy needs? How much and for how long?
- What resources does the municipality currently have at its disposal for supplying backup power during an emergency and for how long?
- How can these resources be most efficiently distributed?
- Who are the partners who can assist in meeting these needs?

## 5. WATER

### ESSENCE: CHERISH EVERY DROP

#### SUMMARY

In the Northeastern region, we tend to associate water with being plentiful. However, in a continuously changing climate, with faster evaporation, expanding deserts, and more extreme weather, even our freshwater resources can no longer be taken for granted. We are in a time of increasing droughts. Water conservation is everybody's business.

Traditionally, planning for water use and protection has been done in silos. For example, drinking water is often regulated at the state level by health departments and delivered by water utilities which may be privately owned, while stormwater is managed by public works departments in cities, towns and villages, and groundwater supplies are protected by environmental agencies. This leads to all kinds of mismatches in policy and planning. A new movement, *One Water*, which is a program of the US Water Alliance, is fast gaining support among planning and policy groups. *One Water* is an integrated approach to planning for drinking water protection, efficient use of water everywhere, waste-water processing, and stormwater management as an integrated system. Looking at water this way highlights the costs of managing water from storm surges and the long term economic benefits of designing flood-resistant landscapes using "green infrastructure" such as rain gardens and bioswales.<sup>21</sup> These can be done at any scale including small to medium sized installations that help to define a district.

New developments and city-wide master plans are increasingly targeting opportunities for utilizing green infrastructure. Ecological landscape design is used to manage and purify water while creating an array of public benefits from cooling to aesthetics.<sup>22</sup> The City of Philadelphia was able to save millions of dollars in wastewater treatment by developing a large-scale plan for green infrastructure to purify and retain water at its source.

Green City, Clean Waters is the City's 25-year plan to improve the health of Philadelphia's

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<sup>21</sup> Bioswales - is a linear, sloped retention area designed to capture and convey water, while allowing it to infiltrate the ground slowly over a 24 to 48 hour period.

<sup>22</sup> Cole, L., McPhearson, T., Herzog, C., & Russ, A. (2016, June). Green infrastructure.



waterways. The plan primarily focuses on green stormwater infrastructure projects to achieve ecological restoration while providing benefits to the city's residents. The program states that its vision is to "unite the City of Philadelphia with its water environment, creating a green legacy for future generations while incorporating a balance between ecology, economics, and equity." Green City, Clean Waters stands out because it tackles aquatic conservation within the broader context of the city and its residents-- its initiatives are not purely ecological, and it has been successful at weaving aquatic restoration into many other aspects of sustainability and equality within the city.

Creating beautiful landscape designs with water - even at very large scales - is actually a high art form for landscape architects. Herbert Dreiseitl, a German-based landscape architect who works internationally, explains,

— “ —————

*“Whether visible or invisible, water plays an essential role in the vitality of urban life. We solve multiple urban challenges by creating desirable green spaces often in marginal land while at the same time solving stormwater flooding problems, improving water quality and thereby creating harmonious blue-green solutions, also increasing the resilience of urban areas.”*

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One approach that can work at any scale is Dreiseitl's open water-scapes -- streams, harbors, ponds and other water-bodies integrated into urban landscapes for beauty and functionality. Another is the water-purifying living machine first popularized by eco-designer John Todd, which uses complex plantings and filtration materials to purify wastewater quite effectively.



Dreiseitl's Tanner Springs Park in Portland, Oregon. The park recreated a wetland that had been destroyed by development.

## CASE STUDIES

Post-hurricane Sandy, **Hoboken, NJ** pledged to tie resilience and recovery planning to their vision zero pedestrian safety initiative, and their water main replacement program, with the goal of building the social fabric of the City and the social cohesion within neighborhoods.

Hoboken's Southwest Park combines passive green space and flood mitigation to meet the neighborhood's needs. It is New Jersey's first resiliency park with integrated green infrastructure to mitigate flooding. The 1-acre Southwest Park is located in a southwestern Hoboken neighborhood, where a majority of residents live in publicly subsidized housing. By detaining 200,000 gallons of stormwater runoff through a series of green infrastructure including: rain gardens, porous pavers, a cistern for rainwater harvesting, and an underground detention system, this socially vulnerable population is better protected from severe rain events. Constructed with low-interest financing from the New Jersey Environmental Infrastructure Financing Program (NJEIFP), the park design includes open lawn recreational space, a dog park, a pop-up market, multi-level seating for small performances, and restrooms and provides much needed park space for the residents of this area.

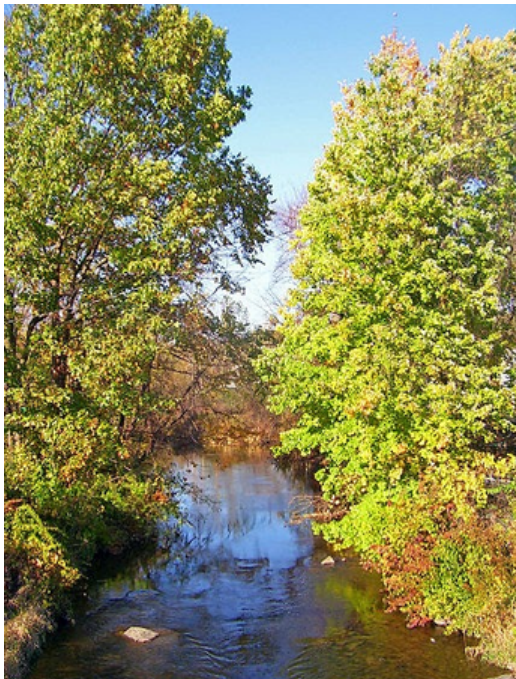
The recently completed Northwest Resiliency Park transformed an asphalt covered site into a vegetated park that will manage at least one million gallons of stormwater. While providing places for people to gather and recreate, the park also works as a whole to reduce flooding, filter and store stormwater, recycle runoff for use as irrigation and toilet flushing, and reduce combined sewer overflows to the Hudson River. Based upon the culminating impact of all of these initiatives, Hoboken, NJ could be considered to be an example of a City-wide resilient district.



Northwest Resiliency Park in Hoboken, New Jersey

A century ago, **Newburgh, New York** was a thriving Hudson Riverfront city where Thomas Edison invented the light bulb. Torn apart by urban renewal in the 1970s and the civil and social unrest it triggered, today Newburgh is in the midst of a city-wide renaissance, involving city staff, commissions, and citizen activists. Many of the revitalization efforts revolve around water.

Newburgh also has a creek - the Quassaick - which flows through two and a half miles of millponds, over historic dams, under and alongside industrial mill buildings, and behind residential neighborhoods. It has become nearly invisible and physically inaccessible due to overgrowth along its banks, which are lined with abandoned factories along much of its length, lack safe pedestrian crossing and access, endured decades of industrial pollution, public safety issues, outdated zoning and private and multi-jurisdictional property ownership. To some of Newburgh's visionary activists, the Quassaick is "the other waterfront," a potential gem for the district, which could be restored and reclaimed as a corridor for sustainable development and recreational use.



Quassaick Creek in Newburgh, New York

In a presentation entitled, "Newburgh's Other Waterfront," architect Peter Smith describes how the Quassaick Creek offers Newburgh many of the same opportunities that the "Emerald Necklace" greenbelt offers Boston's neighborhoods including:

- Places for hiking and bird watching
- New pedestrian walkways through the extension of the Quassaick Creek trail system
- Stormwater management to mitigate surges
- Habitat restoration and protection
- Protection and interpretation of cultural assets
- Economic development through the adaptive reuse of historic mill buildings, (one idea is to create a food hub), and redesigning Lake Street as a complete street with mixed use development
- Renewable energy including mini-hydro-electric
- Re-orientation of nearby neighborhoods to re-connect to the stream corridor's estuary, ponds, and woodlands so they become attractive places to live, work, and play

Add to these a good measure of creative leadership, which Newburgh is well known for. Every old industrial town was originally located and designed to take advantage of access to water. It is not far-fetched to think of these elements as anchors of a revitalized district based upon restoration of the original watercourse and daylighting the river within the urban landscape.



Photo courtesy of Craig Kuhner

— “ —  
*“Waterfronts can easily become the most attractive public space in a city.”<sup>23</sup>*  
— ” —

## ACTIONS

- Using local flood maps and consulting friendly experts, assess the district for opportunities for introducing green infrastructure (including native plants) that help retain water in the soil and manage flood risks through planting and sustainable landscaping techniques.
- Add curb extensions and bump outs planted with water absorbing plants.
- See if your municipality can pass (or has passed) any incentives for builders to use advanced water-saving systems and appliances in new construction.
- Launch campaigns to engage landowners and residents to create beautiful water-saving spaces including green roofs:
  - e.g. Kansas City's 10,000 Rain Gardens<sup>24</sup>
- Work with a local garden supply shop and/or school to teach a regular course in water-efficient gardening and landscaping, and document the local projects that result.
  - e.g. a map, diagram, photographs, farmstand
- Turn your City Hall, post office or library into a demonstration garden with cisterns to collect runoff and information about the benefits of green walls and roofs (Hoboken NJ).

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<sup>23</sup>

Enrique Penalosa, former Mayor, Bogota, Columbia Keynote, Sustainable Futures Conference.

<sup>24</sup> Sustainable Cities Institute, 2005



- Plant rooftop gardens on buildings with flat roofs.
- See whether your local water utility has a program to help homeowners and businesses upgrade to more efficient washing machines, water heaters, toilets and other appliances; if they do, promote it and work with a local appliance store on a group buy for high-efficiency appliances; if they don't, encourage them to create one.



"Rooftop Garden" by Clover\_1

- Install public drinking fountains and water-bottle filling stations prominently throughout the district, wherever possible working with property owners to share the cost.
- Group purchases of rain barrels (and kitchen waste composters).
- Install stormwater collection systems to collect rain and store it underground for future use.
- Set up a collection site for plastic water bottles; regularly publish photos of the volume collected, along with data about the impacts of plastic in the environment; do an art contest with the collected recyclables.



# GUIDING QUESTIONS FOR WATER WISE LOCAL DEVELOPMENT



- When does your community have too much water, where and why? Too little water? Who is already managing this resource or cares about it?
- Does your community have a green infrastructure opportunity assessment and strategic plan? Are there nurseries or landscaping businesses that could lead in creating some demonstration teaching gardens? How could community members who live in flood-prone areas get involved, learn gardening skills, and create rain gardens and green roofs?
- Are there water bodies that have been neglected that could become destinations, natural habitats or places for recreation and connecting with nature?
- How do people get access to free drinking water in public spaces? Are there water fountains, water bottle filling stations?
- Is bottled water aggressively marketed? Are there ordinances regulating or prohibiting single-use water bottles? Is there political will to reduce bottled water use and provide for sustainable and free access to public water?

## 6. MATERIALS MANAGEMENT

**ESSENCE: CLOSED LOOPS- WASTE IS MATERIAL THAT HAS NOT (YET) BEEN PUT TO GOOD USE;** Capture all used products that can be recycled, upcycled, and reused.

— “ —  
*“One person’s trash is another  
person’s treasure.”*  
— ” —

### SUMMARY

Most communities have some recycling infrastructure, but national average recycling rates are only around 40%. An intentionally designed district can become an epicenter of opportunity for scaling up recovery and economically productive uses of new materials - that which was formerly considered as trash.

People are finding all kinds of new ways to use materials over and over again, instead of getting only one use out of them and discarding them. For example, recycling based building materials can be incentivized by local code.



"Rag-Bag" by Dodi Reifenberg

## CASE STUDIES

Recycling based economic development is a sophisticated pursuit as the Appalachian Reuse Corridor demonstrates. The **Appalachian ReUse Corridor** comprises a network of economic development agencies, private companies, and non-profit social enterprises, all working together to revitalize the economy in the Appalachian region by diverting waste and encouraging material reuse. Through their efforts, the ReUse Corridor has revolutionized reuse and recycling infrastructure planning in rural areas, and has proven that exploitation of resources and people (as experienced first-hand by the region) is reversible. By the end of 2020, the network repurposed over 100,000 pounds of textiles, 40,000 pounds of books, and about 2 million pounds of other materials and products. In addition, the network was responsible for 300 new local jobs, 50 new businesses, 1,200 new trained workers, \$25 million in regional investment, and for redeveloping 200,000 feet of abandoned property. The core concept of the Corridor, which is to “restore access to and control over the resources that are now filling up local landfills and incinerators at great cost,” is widely applicable and could be adapted as part of the framework for a new, nation-wide recycling paradigm and included in a resilient district plan.

The ReUse Corridor initially collects materials at regularly scheduled “ReUse Corridor events”, which often occur in collaboration with other local events. Upwards of five tons of materials are usually dropped off, and in 2020, participants aggregated 43,000 tons of materials and products. Then, the waste is sent to processing and end-use manufacturers in the region, where each member enterprise acts as both a drop-off site and pick-up site, making materials exchange convenient for other members. For example, local schools play a major role as a common drop-off point for dozens of families-- this is also valuable because by witnessing the program, children are able to learn about waste and reuse early on. The overall result of these efforts is that clean recyclables, compostable materials, and high quality repairable products are delivered to their respective partners, later rejoining regional markets. In addition, the network is constantly seeking new additions, deepening its connections and expanding naturally throughout the region.

The Appalachian Reuse Corridor is a valuable example of economic growth emerging from community involvement, strategic collaboration, and creativity. Sometimes a flashy and expensive technological solution is not the only way to create sweeping change, and simply

rethinking existing structures, such as waste streams, can be equally ground-breaking. The ReUse Corridor is also unique because it relies upon a fine-tuned, collaborative network approach to region-wide waste management and materials exchange, operating across multiple states and counties.

On Earth Day 2020, the City of Dallas released a **Comprehensive Environmental and Climate Action Plan**, which commits the City to reach net zero carbon by 2050. 2030 targets include the diversion of 35% of organic waste, the diversion of 60% of paper waste, and a 35% reduction in waste diverted from landfills.

Central to the CECAP are solutions that address the environmental injustices of the past, placing equity at the center of this effort. The City's goals are not only to achieve measurable reductions in carbon emission and enhance environmental quality for vulnerable residents, but to improve their educational and economic outcomes, synergize jobs and energy-efficient affordable housing with transportation infrastructure to increase access to walking and biking options, and public transit. Each action in the plan was evaluated for its potential to deliver a wide range of co-benefits, including social equity, economic, public health, mitigation, sustainability over time, environmental quality, and adaptation.

The CECAP was developed through extensive stakeholder engagement and community outreach – through which nearly 10,000 community suggestions were collected- that included both an Environmental Planning Task Force formed of internal City staff, and an external Stakeholder Advisory Group, formed of public agencies, education, business, public health and social and environmental advocacy groups who continue to advise the City on outreach, trajectory, and milestones for the plan. City staff is also working with other local cities through related efforts at the North Central Texas Council of Governments (NCTCOG).

Specific goals of the CECAP are to:

- Actively promote source reduction, recycling, and composting to the Dallas community by expanding current education efforts to inform residents and business owners of their options to reduce, reuse, and recycle. The City published a Dallas Resident's

Guide to Recycling to educate residents on proper ways to prepare recyclables for reclamation and the Dallas Electronic Recycling program which includes locations to drop off computers, TVs, printers, microwaves, and other appliances.

- Develop a comprehensive green procurement plan for city operations and establish a sustainable procurement policy by conducting a goods and services purchasing study and implementing a voluntary green procurement pilot program.
- Improve solid waste, recycling, and brush/bulky waste collection efficiency by evaluating service frequency and collection routes for efficiencies.
- Formally adopt a Local Solid Waste Management Plan and implement a Zero Waste Management Plan.

These models point to a wide range of actions that can begin light-quick-cheap and build substantial capacity.

## ACTIONS

- Create a reuse center for durable items such as electronics, furniture and clothing or art and craft supplies and materials like the reuse centers in Ann Arbor, MI.
- Organize a periodic swap event to find new homes for still-valuable items people no longer want or need. This may be a general purpose reuse center, a tool library, a consignment boutique or something unique.
- Create a district food waste composting program combined with a “waste not” initiative to reduce food waste.
- Look into local recycling rates (30-35% on average) and survey folks to better understand the barriers they face to recycling help it to happen; investigate incentive programs like RecycleBank which offer local shopping rewards points for recyclers (the more you recycle, the more you earn)
- Start a Repair Café, in a library or public school, to extend the usefulness of everyone’s “broken but beloved” stuff and build self-reliance.
- Hold an annual “Trashion Show” to draw attention to the diversity and usefulness of stuff with clothing designed by artists made from recycled materials.



Kid's Take-Apart table at a local Repair Cafe

# GUIDING QUESTIONS FOR REDUCING WASTE AND CAPTURING OPPORTUNITIES IN MATERIALS MANAGEMENT



- What recyclable materials might we capture more effectively and begin to use in the District? What is manufactured here and what is discarded?
- How can recycling and reuse be made easier – for example, with neighborhood scale collection systems, a reuse center, low cost or free composting bins, or “circular economy” programs like collecting used textiles?
- What businesses connected with materials recycling or reuse can either be attracted to or started up in the District? Is there an opportunity to train local youth to work in these enterprises?
- Are there creative ways to gather up “waste” and make public art to show its scope and impacts?



## 7. FOOD AND AGRICULTURE

**ESSENCE: GROW IT, BRING ON THE SPICE, FEED EVERYONE, AND TELL THE STORY.**

### SUMMARY

Food is a well known economic driver. Dense cities are not able to produce all the food that is consumed within their boundaries. However, every community is part of a larger foodshed<sup>25</sup> that connects producers and growers to consumers of farm, forest, and fishery products. A resilient district can be created around a fresh food and produce distribution and marketing hub, a place for creating value added specialty and artisanal products, and a strategy for energizing the local food economy. That food hub can provide space, equipment, training, and distribution opportunities to culinary creatives who can grow their own businesses and help address a community's food-access and security challenges and opportunities which range from locavore food offerings in restaurants and food trucks, to local sourcing of fresh food and products by institutions such as schools and hospitals, to bringing back indigenous foods and culturally based agricultural practices, to encouraging a new generation of multi cultural farmers.

Capitalizing on creative opportunities to work with the District's food economy is about not just production for its own sake, but the synergies of involving people in a creative activity that is unifying as well as healthful that also ensures them a stable source of income.

### CASE STUDIES

Building on local assets, **Eastern Market** is envisioned as the center for food in Detroit and the region, with uses that support retail, wholesaling, packaging, and food/beverage processing, and invests in food-related businesses. This district exhibits a visible connection to the land, with urban farms and the popular indoor/outdoor market that gives the district its name, where as many as 40,000 Detroiters come from across the city each week for locally grown produce and locally made food. Productive landscapes proposed to the east of the district provide the opportunity to create a full-year growing

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<sup>25</sup> Foodshed - A foodshed is the geographical area between where food is produced and where that food is consumed. Kloppenburg et al., 1996

cycle, which would ensure Detroiters have better access to fresh food and feed the processing and packaging activities that provide the greatest number of jobs in the food cluster. Eastern Market is an intense mixed-use district that seeks to grow food cluster activities while reinforcing local retail and creative production. Dequindre/Eastern Market is designed to become a combination of Live+Make activities, light, and general industrial typologies and could add additional services and programs to serve the surrounding district . Detroit's urban farming project utilizes old and vacant lots across the City and demonstrates the economic benefits of putting vacant lands to use as farmland, not only to feed people in the short term, but to help communities struggling to overcome the long-term effects of economic inequity.

Located in the Woodrow-Mountain neighborhood of Dorchester on a long-neglected and vacant 20,000 square foot lot previously owned by the City of Boston, MA, **OASIS on Ballou** incorporates urban agriculture with sustainable community development, social equity, and social entrepreneurship.

OASIS (Opportunity Affirmation Sustainability Inspiration Success) on Ballou is an urban agriculture project that transforms long vacant land, unites community, provides healthy, affordable food, and creates employment and training opportunities. OASIS promotes active living, improves resident health, and creates a safe place for the community to learn and engage in sustainable urban farming. The initiative provides green job training, social enterprise economic opportunities, and enterprise management with special involvement of men of color. The site includes a production garden, a demonstration garden with accessible raised beds, and outdoor classroom space.

## ACTIONS

- Evaluate the District for food security stresses and opportunities, and (working with local agencies and experts) figure out if there are ways to bring in an affordable healthy local food supplier or organize the planting of edibles such as fruit trees and berry bushes in



appropriate public spaces

- e.g. Seattle, WA; San Francisco, CA; Madison, WI; Asheville, NC; Boston, MA
- Make sure your local zoning allows food trucks<sup>26</sup> and find locations to encourage them, especially those that are run by local entrepreneurs, with a focus on women and entrepreneurs of color
- Create or attract a business center producing useful items from reclaimed forest products and fibers
  - e.g. New York Heartwoods
- Community media to educate the District about business owners and who they are
  - e.g. Radio Kingston
- Find abandoned orchards and start a gleaning program, which could give rise to a business like Abandoned Cider in Woodstock NY
- Build a Farmer training center with a farmer's market (Glynwood Center Cold Spring, NY)
- Explore the possibility of a food business incubator<sup>27</sup>
- "Just as gym members share workout equipment, members of many food incubators share commercial kitchen space."<sup>28</sup>
- Identify valuable food items that can be produced in small spaces and develop a careful test project or two with the help of your local extension service (ginseng, anyone?)
- Portable marketplace kiosk to test new eco-products, from scooters to personal mess-kits for takeout food



Eastern Market in Detroit, Michigan.

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<sup>26</sup> Huey, J. (2015, March 3). *Case study: on the go - insights into food truck regulation in US cities regulatory reform for the 21st century city.*

<sup>27</sup> Danovich, T. (2016, February). What are food incubators and do they create viable businesses

<sup>28</sup> Aubrey, A. (2014, April). For food startups, incubators help dish up success  
[.https://www.kpbs.org/news/2014/aug/18/for-food-start-ups-incubators-help-dish-up-success](https://www.kpbs.org/news/2014/aug/18/for-food-start-ups-incubators-help-dish-up-success)

- Endorse a Hundred Mile Food Challenge<sup>29</sup> or similar effort during the growing season; encourage restaurants to purchase and highlight locally-sourced ingredients
- Local chefs publish a local foods/local bounty cookbook and host dining events like community dinners to showcase the highlights
- Eat local week promotions<sup>30</sup>
- Host Movable feasts/Community potlucks
- Hold a Seed and plant sale / swap
- Create a seed vault or seed library

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<sup>29</sup> Bennington Farm to Plate Council. (2014). Food system action plan. Retrieved from Bennington County Regional Commission website: <http://www.rpc.bennington.vt.us/documents/BF2PFoodSystemActionPlan.pdf>

<sup>30</sup> Stick2local.com

# GUIDING QUESTIONS FOR A FOOD AND FARM INSPIRED DISTRICT



- What are the challenges faced by low-wealth members of the community to access fresh, locally produced food? How are the benefits of easy access to healthy food communicated to residents and City leaders?
- What are ways to communicate the benefits of easy access to healthy food communicated to residents and City leaders?
- Survey/research: What do we grow plenty of? And what do we import that we might produce more of locally?
- Survey the numbers of farms/ famers. Ask them whether they have or not they have access to markets, distribution, warehousing, harvesting and financial support?
- Do we have the facilities and places to support culinary and value added food start ups for people of color and those with low or no funds to get started?
- Identify what policy factors might get in the way of more local food production? For example, does the local zoning code provide for agriculture (produce/ animals/ etc.)?

## 8. ART AND AMENITIES

### ESSENCE: A BEAUTIFUL PLACE WHERE EVERYBODY CAN PLAY

#### SUMMARY

Murals, street furniture, temporary and interactive sculpture, lighting, and ornamental landscaping are among the low-cost, high-impact ways to define a public space. From the multi-colored picnic tables around Boston's Government Center to the sidewalk murals around electric vehicle charging stations in Santa Monica, public art has been used to highlight and improve the useability



Faneuil Hall Marketplace in Boston's Government Center

of public space as well as enhance the aesthetics of the public realm. "Colorists" in San Francisco began intricately decorating historic buildings as a movement of preservation and celebration that enhanced property values and created jobs for local youth.

The possibilities do not stop with public art and sculpture. There are also huge opportunities for the beautification of the public realm through the design of public amenities, and the creation of signature parks and recreational facilities. Barcelona has filled significant tracts of vacant urban land with both sculpture and publicly accessible recreational facilities – as simple as a basketball court or climbing wall – that are integrated into open spaces in regular city blocks.

#### CASE STUDIES

Arts and Entertainment Districts help support community revitalization through direct support to artists and other creative enterprises, tax-incentives to property owners, and public engagement in experiencing the evolving culture and traditions of a city's communities. For example, in 2001, the State of Maryland created the **A&E Districts program** to "develop, promote, and support diverse artistic and cultural centers in





Vintage gas works now public art installation in Seattle, Washington.

communities across Maryland" by reinvesting in existing communities to support residents, local economies and the environment. In 2018, the 25 Maryland A&E Districts reported \$1 billion in state GDP, \$72 million in local tax revenue, nearly 10,000 jobs that reflect \$320

million in wages. The districts guarantee that artists and other cultural producers won't be evicted or priced out of their homes, studios, and exhibition spaces by giving owners of manufacturing, commercial or industrial property a property tax credit when their facility is wholly or partially renovated for use by residing artists or arts enterprises. Qualifying artists residing and working in the district receive income tax credit on their earnings produced or sold within the district.



Rollins Conservatory in Baltimore, Maryland.

Public art and neighborhood revitalization activities could be a natural outgrowth of such a partnership.

The Neighbour Hub University of British Columbia & Emily Carr University won a prize in 2018 for their design of structures to be located in public parks in every neighbourhood across Vancouver. These structures provide an opportunity for residents to generate their

own energy and water for daily use and during disaster situations – all while being independent of the City's existing infrastructure. The structure appears as public art that provides light and shelter on a rainy day. Upon further inspection, instructions explain the purpose of the Neighbour Hub and reveal its interactivity. Two pedal charging stations allow users to back their bike into the structure to generate power.



<https://www.ecuad.ca/news/2018/designing-resilient-cities>



*The Drop* in Vancouver, British Columbia.

LED lights glow to indicate how many Watts of energy are being generated by the user. Power is stored within batteries to charge cell phones and the embedded radio. Vancouver's abundance of fresh, drinkable water in the form of rain, is captured in a 1500 gallon cistern and is metered to meet municipal regulations. Residents can fill their water bottles, and watch the water collection gauge move, giving them a sense of water availability.

## ACTIONS

- Develop a pop-up art installation that invites performance or art-making, like the Happy Spot studio in Kingston created by Riley Johndonnell, highlighting his own special color, International Optimism Yellow (Int-o Yellow)

- Paint It! Day for sprucing up building facades, mailboxes, benches, on-street electrical transformer boxes, etc.
- Commission murals on building facades - or around EV chargers - to highlight their locations
- Create amenities for parks such as chess boards back-lit with solar panels, sculpted from local stone or recycled wood
- Focus clean energy and high-efficiency innovations on arts and cultural facilities adding to their real estate value and cachet
- Throw a festival that becomes your community's signature big event, like Newburgh Illuminated in the city where Edison invented the light bulb, or the New Haven Festival of Arts and Ideas
- Experiment with play streets that are shut down at specified times for pedestrian and recreational uses
  - e.g. Pop-up picnic amenities, hop-scotch boards, etc.<sup>31</sup>
- Use the Better Block<sup>32</sup> method to enhance an area with fast hands-on activity; from paint touch-ups to potted native plants -- all in a coordinated burst
- Invite landscapers and garden artists to create an installation on an unlikely site
  - e.g. *The Bridge of Flowers*, Shelburne Falls, MA
- See if you can identify an "arts trail" connecting galleries, museums, studios etc., coordinate the proprietors and nearby restaurants to host events
- Create or attract a maker or design studio
- Start a monthly art walk
- Exhibit the work of artists that use recycled material to create artworks or that have an environmental focus to their art



*The Bridge of Flowers* in Shelburne Falls, Massachusetts.

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<sup>31</sup> Plotz, M. (2013, May). Streets that work [Blog post]. Retrieved from <https://www.pps.org/blog/streets-that-work/>

<sup>32</sup> TEDx Talks. (2012, February). How to build a better block: Jason Roberts [YouTube]. Retrieved from <https://www.youtube.com/watch?v=ntwqVDzdqAU>

# GUIDING QUESTIONS FOR PROMOTING BEAUTY AND CREATIVE USE OF PUBLIC SPACES



- What cultural and artistic programs, events, celebrations and festivals occur or have taken place in the district you are defining? How might they be expanded upon?
- What are the public space amenities in the district, currently? Whether it's a historic clock or a tiny park area, how can those assets be enhanced and fully utilized? And how could surrounding spaces be enhanced with public art and amenities to improve public access and usability?
- How can local artists be engaged and empowered to enhance public space for both beauty and functionality? Are there artists whose work is environmentally-based, either in terms of theme and content, or the materials they use?
- Where are there available lots, sites, or buildings that could be used for pop-up installations and exhibitions?
- Are there programs like [www.youthbuild.org](http://www.youthbuild.org) where young people could be trained to design and build the public amenities that are needed?



## 9. INCLUSIVE, SUSTAINABLE COMMUNITY AND ECONOMIC DEVELOPMENT

### ESSENCE: A THRIVING SUSTAINABLE DISTRICT IS GOOD FOR BUSINESS AND RESIDENTS

#### SUMMARY

Assuming a proposed district has significant, existing commercial and/or industrial activity, then the actions already described in this document can synergize with some of the economic development that may already be occurring. Public amenities like bike paths and racks, EV chargers, parklets, and water fountains certainly make the environment surrounding workplaces more attractive, and make businesses in the District more attractive to customers. The shared mission of the District might improve business-to-business relationships. Resource-efficiency – especially in electricity – cuts operating costs for businesses and may help to retain them. If these benefits are tangible enough, businesses or a business association may even become drivers for economic development, allowing for public-private financial partnership and greater people-power for a quicker transition to sustainable living.

Economic development is a changing field. The conventional strategy of recruiting big employers may actually be at odds with the local culture, and may give unnecessary tax breaks to large companies and the developers who build their complexes who have limited loyalty to a place. Small business leaders are increasingly advocating for “local first” economic development to support existing local enterprises and attract companies that understand and are committed to the community. Locally owned businesses are known to channel more dollars into the community by buying from their peers. As shown in Michael Shuman’s “Put Your Money Where Your Life Is,” there are plenty of tools for investing in Main Street by making sure your community’s economic development policies are in tune with the goals and vision of the plan for the district.

According to David Dixon, an Urban Places Fellow at Stantec, “1000 housing units can bring a block of main street back to life.” That number is smaller in small communities. Safe, sustainably built affordable housing is a key economic development strategy for ensuring that long term residents are able to continue to live in their neighborhoods and that local

businesses can afford to remain open even after their town becomes environmentally healthier, more walkable, economically stable, and better connected to municipal services.

There are several ways to be sure that legacy residents are able to stay and prosper in the communities they've lived in for generations as well as ensuring the equitable distribution of relevant resources and benefits to residents and small business owners.

First is advancing property and home ownership. For example, this can be done through programs aimed at helping first time homebuyers - especially those facing historic disadvantages - to qualify for mortgages, offering down-payment assistance, and providing financial management skills where needed, to help lower income residents make the transition from renters to owners.

The second is meaningful involvement of those who are at risk of being displaced, in decisions about local development from the outset, whether it's resiliency-driven redevelopment or the policies of lenders, city authorities, or developers. At the time when an ambitious effort like a resilient district development is in the early planning stage is the right time to make sure a diverse range of community residents are aware and involved and empowered to make their voices heard by planning boards and other decision making bodies. As Ned Sullivan, Director of Scenic Hudson points out,

— “ —————

*“Grass-roots organizing and education are vital to making this happen and to ensuring that elected officials listen to and stand up for the interests of long-time, historically disenfranchised residents.”*

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Third is to create, or work with, specific institutions that are devoted to equity in community and real estate development, such as land banks, environmental and social justice organizations, housing advocacy groups, and nonprofit housing developers who build affordable housing under-served by the private sector. Generally composed of community development corporations as well as national and regional non-profit housing organizations, they use multiple avenues of financing, including Community Development Block Grant funds and federal Low Income Housing Tax Credits. Land Trusts work to



protect environmentally and socially significant land while making it accessible to the public through urban agriculture projects, building commuter and cycling trails, preserving heritage sites, and affordable housing.

Well designed public spaces are equalizers, welcoming rich and poor, landlords and tenants alike into shared space, that is welcoming as well to a society's most vulnerable citizens, as Enrique Penalosa, former Mayor of Bogotá, Columbia and one of the world's foremost community development strategists, points out. To encourage developers to focus on creating greater equity and inclusion, it makes sense to create performance metrics of the social benefits of more walkable, environmentally sustainable communities with stable, diverse populations -- benefits to residents and the municipality as well - which also makes them more economically competitive. And a good city makes people happier.

## CASE STUDIES

Providence, Rhode Island's 2019 **Climate Justice Plan** revolves around environmental justice frontline communities, and makes equitable development a core tenant of all intended action—an equity intensification that should factor into every district-wide sustainability initiative. The Providence plan also acknowledges that “changing light bulbs is not going to solve the climate crisis,” and urges moving from reliance on individual, environmental actions to climate initiatives that “fundamentally transform the energy system that fuels [the] economy.” In pursuing collaborative governance, equitable housing access, community health, regenerative economies, and clean energy and transportation the Providence plan centers racial equity solutions, many of them community-based, and illustrates the interconnectedness of resilient city systems.



Family Reading Room Kennedy Plaza, Providence, Rhode Island. Photo courtesy of Philip Winn 2014

**People United for Sustainable Housing (PUSH)** is a Buffalo nonprofit that upholds affordable sustainable housing as one of its primary objectives. PUSH is constantly acquiring dilapidated properties and renovating them into affordable housing units available for rent. In order to bring down the cost of utilities and also make renewable technology more accessible, PUSH fits its properties with green technology such as solar panels, special insulation, and heat-radiant flooring. Within these living complexes PUSH emphasizes community control of resources to involve tenants and grant them control of their living space.

PUSH accomplishes a number of goals related to affordable housing, sustainability, and green tech accessibility that would be valuable to include in the planning to increase the resilience of any district. Efforts such as those of PUSH could also be connected with other projects within a district (multi-use development, place making) and would easily fit into policies such as a Green Code.



PUSH Buffalo Greenhouse by 100isNow

**Cooperation Buffalo's** approach to economic development is through supporting the start-up of new worker cooperatives and conversions of existing businesses to worker ownership and providing capital to cooperatives through the Seed Commons Community Wealth Cooperative. It is led by Buffalo 25 member cooperators: community members with experience launching and working in worker cooperatives, housing cooperatives, and

community land trusts. They have invested nearly \$8 million in cooperatives through 100 “non-extractive” loans, for which borrowers are not required to make interest or principal repayments until they are able to cover operating costs. One such loan financed the conversion of the Rose Garden Early Childhood Center in Buffalo, NY to worker ownership as the founding owner retired to continue to be able to provide much needed child care services to a growing population of working residents.

**Main Street America** and Greenworks Lending have launched the Commercial Property Assessed Clean Energy (C-PACE) financing program that helps small businesses save energy and money through energy efficient building upgrades, in 31 states. Through C-PACE, Greenworks Lending funds 100% of the hard and soft costs of commercial building upgrades and new construction elements that improve energy performance. Repayment is made through the property tax bill over the useful life of the upgrades (often 20 plus years). Their Entrepreneurial Ecosystems program targets entrepreneurs and small business owners, particularly women and minority owned businesses, for technical support and resources that connect them to the networks of financial, social, and human capital with an emphasis on the value of place and the physical environment as central factors in creating and growing successful enterprises and thriving commercial districts.



Downtown Rhinebeck, New York. Photo courtesy of Barbara Todd 2021

Local main streets, with unique character, historic building stock, and mixed-use development also tend to have more diversity in terms of business type, and have higher density residential offerings —factors which in turn fuel a healthier entrepreneurial ecosystem. The Main Street approach provides a framework for commercial district revitalization that is rooted in

improving local economic conditions and overall quality of life and public spaces that attract new businesses and places for employees to live and work.

## ACTIONS

- Seek to build the capacity of the community to engage with the project which begins by building trust, and developing rapport with the community. Work to Increase levels of neighborhood connectedness to government decision-making. For example, host a local investment workshop with community activists, entrepreneurs, bankers, investors, and philanthropists.
- Start a Time dollars initiative -- Timebanking is a kind of money. Give one hour of service to another, and receive one time credit.
- Make sure that business and community development groups are central players in your partnership. A Business Improvement District, local development corporation, or other place-based neighborhood civic or organization might be an ideal leader. Focus on diverse coalition building and ensure inclusive and collaborative decision making among all the partners. Collectively, come up with strategies for business recruitment, incubation, and support as well as branding and marketing.
- Host a business incubator, fellows programs, etc. in conjunction with a local university, like the youth enterprise center in Philadelphia in the old American Bandstand building.
- Focus on Business to Business marketing to strengthen existing businesses, and consider creating a local currency (like the Hudson Valley Current)
- Learn about the context before the project starts, for example, by conducting historic, and cultural background research on the area, learning about the community leadership and power structures, demographics, public health, and housing availability, affordability, and conditions.
- **Conduct** a community inventory to Identify at least one anchor location to concentrate economic activity around that reflects the District's goals and priorities. Consider the impact that strategic property development can have, such as mixed-use artists' housing, studios and galleries, a makerspace; even a small incubator for sustainable businesses. The inventory also should consider the availability and ease of access to multiple modes of transportation stops and service, abandoned or otherwise available building stock, public spaces and recreational and cultural facilities, and identify investment ready projects.

- **Do** a supply chain analysis to identify gaps indicating local business opportunities, including services – as simple as out-sourcing of basics like laundry rather than patronizing the surrounding community<sup>33</sup> and a Retail Leakage analysis to identify what products and services people are going elsewhere to buy. See *What's Missing on Main Street?* survey to guide and inspire business attraction. (Appendix C)
- **Start** with projects that visibly benefit the local economy and get local employees and neighbors involved, whether it's fundraisers for bike racks or "build your own rain garden" workshops. Refer to the ideas listed under Actions in each of the previous chapters and under **ACTIONS** in Chapter 10.

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<sup>33</sup> Porter, Justine. 2015. Community Wealth Summit Poughkeepsie.



# GUIDING QUESTIONS FOR PROMOTING INCLUSIVE, SUSTAINABLE COMMUNITY AND ECONOMIC DEVELOPMENT



- If you are a business owner, what products and services are imported or outsourced? Could these products and services be purchased and produced locally?
- What work needs to be done to realize our vision? Be it solar installation, preservation of buildings, landscape design and horticulture, public art, park development, lighting retrofits – how can we give priority to local talent to do the work, creating enduring jobs and businesses in the process?
- What tools would assist broadly with economic development?
  - i.e. a local investment vehicle, a marketplace
- What kinds of “lighter, quicker, cheaper” projects can be catalysts for substantial development?
- What community groups are already active in the district and how can they be more fully engaged?



## 10. PUTTING IT ALL TOGETHER



*“A plan is nothing unless it degenerates into work.” – Peter Drucker*



The foundation of any innovative district development effort is the networks of collaboration that are nearly always present in small cities, towns, and villages. Most likely, there is a short list of fairly obvious actions that would make the center of the community more environmentally sustainable, adaptive, and vibrant. The essential step is to identify local partners and stakeholders from the community that represent a broad cross-section of the neighborhood and bring them together to thoughtfully consider what are the best options that meet the needs of the community and reflect the local context, so that the best and most impactful ideas are incorporated into the action uplan.

While this kind of ambitious agenda requires work, it's exciting work that can attract many hands, hearts, and minds. The Project for Public Spaces lays out two contrasting ways of thinking about planning for major, on-the-ground projects, Discipline Driven vs. Community Driven. In a discipline driven approach, an objective is set or a problem is defined, and then the architects and engineers come up with a detailed plan. Only when there is a fairly detailed conceptual plan is the public invited to weigh in on the details. Especially if money has been spent, there is often a resistance to going back to the drawing board to change fundamental concepts, even if they are inappropriate or do not meet the needs of the community.

The community-driven approach - and our broad partnership vision - builds on a more integrated vision developed collaboratively by those who will make use of the project and be impacted by it. Here, the community identifies the most pressing challenges and issues that impact their lives which allows the sustainability work to be grounded in the issues that most directly affect the community. The public then generates a vision and a sense of the values driving that vision. They are encouraged to put forward a wealth of ideas about how the vision might be accomplished. Then the architects and engineers come to the table and help to sort out how the community's vision can be brought to life. Short term experiments can be designed to test out ideas, generate public enthusiasm, resolve any

shortcomings, and attract more partners and resources. They will lay the groundwork for the longer term capital investment that will be required to make a community's vision a reality.

The action plan can be simple. Still, it needs to be inclusive, engaging as many of the people who will be affected, or who will benefit, as possible. There are several important reasons for this.

First, a district strategy has to work for everyone who is impacted, not just for the original think-group. Bike racks and water fountains are hard to argue with, but vegetated walls and artistic solar lights will tend to raise eyebrows if they appear out of nowhere.

Second, some of the greatest potential for this approach to revitalization comes from its ability to link local environmental issues/improvements to social and economic justice initiatives by addressing past development practices that have harmed some neighborhoods and groups. If parts of the district suffer from heat islands, lack of tree cover, food deserts, brownfields and blight, the district strategy can focus on addressing those conditions in a way that reflects the priorities and values of residents and makes the entire community more livable. This requires asking questions about the people and their relationships to one another and to the community as a whole:

- Do the people creating the district look like the people living in it? (If not, stop and fix that by engaging with a more diverse, representative core group!)
- What are some larger issues that impact people's lives? Access to jobs, healthcare, transit, healthy food? How can the district's development strategy address these?

Be sure to listen well and early to groups who may use public services the most, so that your strategy can prioritize projects that directly benefit them.

Third, involving more diverse groups of people to generate more creative ideas will raise visibility and therefore impact. This is especially true if the planning process itself is designed to encourage creativity from many different communities of people within a District.

## A COMMUNITY-DRIVEN APPROACH

**West Oakland Environmental Indicators Project** (WOEIP) is a resident-led, community-based environmental justice organization located in Oakland, CA. The organization is focused around curbing air pollution and its disastrous effects, as West Oakland is heavily trafficked by trucks, leading to very poor air quality. The organization has mobilized neighborhood residents to assist with air quality monitoring and pollution data collection, which has helped empower community members as well as produce more accurate environmental and public health data to support policy reform. Though not every district may include areas with poor air quality, valuable lessons can be learned from WOEIP about the role that residents can play in data collection and problem solving.

### ACTIONS

There are many ways to engage people in initiatives to transform the places where they live. But there are some clear steps and strategies that are important to establish the foundation.

Organize the vision and partners

- Generate a list of possible collaborators, partners, stakeholders, helpers, and champions who, together, represent the community in all its diversity. They can be drawn from civic, cultural, municipal, educational, and religious, business and other institutions, as well as the networks of the initial group.
- Take them (and other interested parties) on a walking tour to begin to identify the area and the boundaries of the district.
- An asset map is a useful tool to identify and make clear the physical, cultural, historic, and public space opportunities and design features in the district.
- When the planning process is formulated and it's time for the kick off meeting, create an agenda that will make the vision clear and empower the participants to begin working together.
- Engage your stakeholders in a well designed visioning session that brings all voices to the table. Engage in "What If" discussions. Document ideas by creating conceptual diagrams or sketches plans or with benchmark photographs from other cities.

- To collect feedback from a wider network, it's useful to put up a waterproof whiteboard with markers in a public space to showcase the concept drawings and sketches. Use photographs that illustrate the ideas and ask people to put sticky dots on the ideas they like best. This will help prioritize the ideas and engage different groups of stakeholders.

When the initial vision has been generated, get going by identifying and carrying out an initial "lighter, quicker, cheaper" project to show that the whole thing is real. It might be a pop-up cafe or cultural event, a rain garden or parklet, or neighborhood wifi. Create a neighborhood mobility hub with a hospitality center with a no-fee ATM, charging, EV charging, a solar powered bus shelter, healthy food vending machine, bike racks and public seating near transit, sponsored by local banks -- whatever captures the community's imagination.

Create a conceptual plan identifying opportunities for: street and transit improvements, additional civic uses that are missing from the district currently, increasing the availability of healthy food and ease of access to it, or an underutilized park or vacant lot that could become a lively, inclusive public space.

Document and evaluate the outcomes and impacts of initial steps, to build momentum for the next ones. Lighter, quicker, cheaper projects are often great grist for news stories, photo exhibits, and social media.

Firm up the plan, roles and responsibilities

- Translate the big goals into steps including resource development, permits, technical studies, and hands-on projects that can continue in the meantime to build momentum.
- Develop a set of success measures to help with ongoing evaluation and course corrections. Consider a district-wide "walkability score," charting reductions in retail vacancies, changes in sales per square foot, increases in tonnage of materials recycled or removed from the waste stream, percentage of residents who work in the District, and public perception of improvements that have taken place.
- Then it's time to develop an internal memorandum of understanding among project partners, covering roles and responsibilities, compensation and accountability.

All this requires working thoughtfully with community systems – the physical assets, human and financial resources and ideas that you can draw upon. Like any revitalization effort, it requires clarity. But it does not necessarily require an in-depth, multi-year, big-bucks plan before anything can happen on the ground. Because grassroots district revitalization initiatives work in existing centers of population and commerce, they can be built up over time based on simple, easily accomplished efforts that bring people together and inspire next steps.

As the seeds are planted, nurture them well.

APPENDIX A:

# GUIDING QUESTIONS TO SUPPORT YOUR OWN LOCAL RESILIENT PLACES INITIATIVE

1. What are the issues and opportunities that come to light in your community when you start thinking about the six priorities and three imperatives?
2. What is the impulse behind your interest in a district scale resilience initiative? How can this impulse be expressed in a short mission statement?
3. How do you define the place that gives rise to this mission?
4. Who else cares about this mission in this place?
5. Who in this place is at a disadvantage in terms of prosperity, health and wellness, connection to the good things the place has to offer? Who in this place is most at risk in a changing climate? Who is at risk of being displaced by a storm or by inequitable land development decisions?
6. What benefits can a place-wide strategy bring to those stakeholders?
7. What assets already exist in this place that could provide a foundation for improving the resiliency of the place? (A bike path, a plaza, a green roof – and more subtle things like training and funding programs run by institutions in the place.) What other programs or elements (described in this Workbook) might it include?
8. What is the work that needs to be done in order to create this place? (As much as possible, map out the entire critical path as you see it – don't get stumped by details, just lay out what seems clear.)
9. What resources will be needed? Consider money, people, technology, land, permits and plans, expertise, and anything else that comes to mind.
10. What can be done now, with the assets, stakeholders, and formative impulse currently available, to turn your vision from ideas to a reality-based project?
11. What (if anything) is holding you back from taking action? What steps could you take to overcome them?



## APPENDIX B:

# SUSTAINABLE HUDSON VALLEY'S RESILIENT PLACES PROGRAM

Resilient Places are a network of public spaces that enhance the physical and social resilience of the communities in which they are located.

Sustainable Hudson Valley's Resilient Places Program supports a community-driven resilience movement through on-the-ground technical assistance, educational programs and training, and project management. This is the movement we need to increase socioeconomic resilience, energy and food security, and strengthen the social fabric of our communities through equitable public participation in the creation, design, and use of public spaces. This is an organizational support program that uses placemaking tools and understandings to:

- Help communities “build back better” by supporting civic infrastructure, harnessing a sense of place and social capital to create more cohesive, economically vibrant and environmentally healthy communities.
- Help community organizations and coalitions devise long-term strategies to represent, empower, and benefit residents.
- Use resilience planning as an opportunity to reverse social inequity, support environmental justice issues in impacted communities, and to address the root causes that create and perpetuate vulnerabilities and insecurity.
- Pro-actively connect planning and funding for climate mitigation, disaster recovery, climate adaptation, and equity-focused community development efforts at the neighborhood, city, and regional levels to ensure maximum community benefit.

### ***We work with communities to:***

- Identify and map resources, networks, and assets
- Engage a diverse and representative range of community members

- Plan programs and projects that achieve the community's resilience and revitalization goals
- Seek support from community foundations, corporations, and government entities to fund the community's vision
- Disseminate best practices and skills of Resilient Placemaking to a wide audience through presentations, workshops and publications.

***We collaborate with:***

- Local, Municipal, and County governments
- Civic and community based institutions, including those that provide emergency services such as libraries, social service organizations, religious institutions, cultural centers, etc.
- Planning consultancies
- Chambers of Commerce and Main Street Groups
- Environmental and climate justice organizations
- Landscape architects and architects working for the public good
- Community networks
- Housing authorities
- Land conservancies and land trusts

***We serve especially:***

- Small to medium cities, towns and villages in Upstate New York, New England and the Northeastern US.
- Waterfront communities facing pressure to adapt to sea level rise and interested in opportunities connected with regenerative economic development.
- Residents of rural communities and small towns who are severely impacted by the stresses connected with climate change and are vulnerable to natural disasters.
- Communities that have been systematically underserved and under-resourced.
- Inter-municipal partnerships interested in leveraging creativity and resources through collaboration.

***For more information please contact [placemaking@sustainhv.org](mailto:placemaking@sustainhv.org)***

## APPENDIX C: GLOSSARY

1. **Incubator** - An organization designed to accelerate the growth and success of entrepreneurial companies or projects through an array of business support resources and services that may include physical space, capital, coaching, common services, and networking connections.
2. **EcoDistrict®** -A defined neighborhood that adopts an intentional sustainable development strategy, makes it highly visible, uses it to benefit residents and foster resilience.
3. **Sustainable** - able to flourish indefinitely without damaging or depleting surroundings. Can apply to a community, an industrial process, or human activity.
4. **2030 Districts** - a program dedicated to sharply reducing energy waste and pollution from U.S. buildings by 2030, focusing on commercial districts where energy savings translate into cost savings
5. **Placemaking** - Building communities around places, inspiring people to collectively reimagine public spaces as the heart of every community
6. **Parklet** - A small seating area or green space created as a public amenity on or alongside a pavement, especially in a former roadside parking space
7. **Traffic Calming** - the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users
8. **Geothermal Open Loop** - is connected directly to a ground water source such as a well or pond and directly pumps the water into a building to the heat pump unit where it is used for heating and cooling.
9. **Geothermal Closed Loop** - Geothermal closed loop system - pumps water and/or antifreeze through a set of pipes underground instead of using a freshwater source

10. **Micro-grid** - A microgrid is a group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid.
11. **Bioswales** - is a linear, sloped retention area designed to capture and convey water, while allowing it to infiltrate the ground slowly over a 24 to 48 hour period.
12. **Foodshed** - the geographical area between where food is produced and consumed.

APPENDIX D:  
**SAMPLE LOCAL SURVEY**  
**WHAT'S MISSING FROM MAIN STREET?**

*Please take a few minutes to share your views and experience about local business needs to assist with economic development planning for the Town of Montgomery and its villages. Thank you.*

1. Where do you live?

2. When you simply must purchase some basic items (milk, juice, pet foods, baby foods or diapers, over the counter first aid) where do you usually end up?

- Village of \_\_\_\_\_
- In a supermarket, such as ShopRite? \_\_\_\_\_
- Thruway Market? \_\_\_\_\_
- Or somewhere else? (where) \_\_\_\_\_

3. What products and services would you most like to see readily available in the nearest town or village center to your home?

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4. In buying what your household needs, what do you see as the greatest costs and hassles?  
Check all that apply:

\_\_\_Travel time

\_\_\_Gas

\_\_\_Childcare

Too many stops to gather it all \_\_\_

The method of transportation \_\_\_

5. Would you say that being able to do more of your shopping locally would make an improvement in your life?

**Yes or No** (circle one)

Comments:

6. Do you perceive a benefit to keeping the dollars you earn within the community by shopping locally?

**Yes or No** (circle one)

7. Where do you usually buy the following goods and services (please identify town/ village and store)? Add comments freely.

Groceries \_\_\_\_\_

Office supplies \_\_\_\_\_

Pet supplies \_\_\_\_\_

Shoes \_\_\_\_\_

Jewelry \_\_\_\_\_

Adult clothing \_\_\_\_\_

Kids clothing \_\_\_\_\_

Sporting/ outdoor supplies \_\_\_\_\_

Garden supplies \_\_\_\_\_

Automotive supplies \_\_\_\_\_



Sewing, knitting, craft supplies \_\_\_\_\_  
Musical instruments, equipment \_\_\_\_\_  
Phones, Tablets, other media devices \_\_\_\_\_  
Shoe repair \_\_\_\_\_  
\_\_\_\_\_  
Jewelry repair \_\_\_\_\_  
Tailoring \_\_\_\_\_  
Dry cleaning \_\_\_\_\_  
Books \_\_\_\_\_

Comments:

8. Are you interested in learning more about local economic development options and possibly getting involved with local revitalization initiatives? If so, please provide your name and contact information:

Name: \_\_\_\_\_  
(Last) (First) (M.I)

Email Address: \_\_\_\_\_

Personal Phone: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Business Phone: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

## APPENDIX E:

# LEARN MORE BY AMENITY TOPIC

- Bike amenities
  - <http://greenstarbikes.com/hybrid/> (Piermont Bicycle Connection, Piermont, NY)
  - <https://www.greenzonebikes.com/> (Online Only, (832) 802-8800)
  - <http://trtbicycles.com/> (TRT Bicycles, Rosendale, NY)
  - <https://herohousing.org/> (HERObike, Greensboro, Alabama)
- Electric vehicle chargers
  - EV Connect <https://www.evconnect.com/solutions-overview>
  - ChargePoint <http://www.chargepoint.com/>
  - EV chargers for home <http://www.evsolutions.com/ev-charging-products-for-home>
- Lighting
  - [www.greenlightdepot.com](http://www.greenlightdepot.com)
  - <http://www.ledwarehouse.com/collections/all>
  - <http://www.slsna.com/>
  - [https://a860-gpp.nyc.gov/concern/nyc\\_government\\_publications/0k225b56f?locale=en](https://a860-gpp.nyc.gov/concern/nyc_government_publications/0k225b56f?locale=en)
  - [http://www.lampworksinc.com/pages/sustainable\\_lighting.html](http://www.lampworksinc.com/pages/sustainable_lighting.html) (Lamp Works Inc., New York, NY)
- Plants and supplies
  - <http://adamsfarms.com/departments/nursery/> (Adams Fairacre Farms, Poughkeepsie, Kingston, Newburgh, and Wappingers Falls, NY)
  - <https://www.agway.com/locations/13/new-paltz-agway> (Agway New Paltz, New Paltz, NY)

- <https://www.herzogs.com/> (Herzogs, Kingston, NY)
  - <https://www.sabellico.com/> (Sabellico Greenhouse and Florist, Hopewell Junction, NY)
  - <http://www.wallkillviewfarmmarket.com/> (Wallkill View Farms, New Paltz, NY)
  - <https://www.sabellico.com/> (Sabellico Greenhouse and Florist, Hopewell Junction, NY)
- Signage
    - <http://asisignage.com/sustainable-solutions/> (ASI Signage, Buffalo and NYC, NY)
    - <https://www.baronsign.com/> (Baron Sign Manufacturing, Riviera Beach, Florida, (800) 531-9558)
    - [www.boyersigncompany.com/](http://www.boyersigncompany.com/) (Boyer Sign Company, Shandaken, NY)
    - <http://www.signarama.com/ky-lexington/services/eco-friendly-signs> (Signarama, Lexington, KY, (859)-272-7886)
- Water fountains
    - [www.elkay.com](http://www.elkay.com) › bottle-filling-stations (Elkay water bottle filling station)
    - [www.grainger.com](http://www.grainger.com) › drinking-fountains (Water fountain catalog)
- ***An urban permaculture resource***
    - <http://www.harvestingrainwater.com/>
    - <https://deepgreenpermaculture.com/diy-instructions/starting-your-permaculture-garden/>
    - <http://permaculturenews.org/2014/01/30/how-to-transition-to-a-permaculture-lifestyle/>
    - [http://www.theecologist.org/green\\_green\\_living/gardening/451581/a\\_beginners\\_guide\\_to\\_permaculture\\_gardening.html](http://www.theecologist.org/green_green_living/gardening/451581/a_beginners_guide_to_permaculture_gardening.html)

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