

# the life zone

feasibility and suitability study

university of louisville mup capstone studio

spring 2011

Louisville Metro's LIFE Zone is a nationally-recognized model for growing a sustainable, local food economy system. The LIFE Zone is an urban district, home to local food distribution centers, processors, a business incubation center, commercial test kitchens, retail and wholesale venues, urban gardens, greenhouses, hoop houses, a public market and a variety of support services dedicated to growing a prosperous local food economy.

Through private, public and university partnerships, coordination of federal, state and local programs and grassroots initiatives, the LIFE Zone will increase production and access to healthy, fresh and affordable, locally-grown foods. Strong connections between the LIFE Zone and urban neighborhoods will eradicate food deserts and create jobs for any effort involved with growing, collecting, processing, marketing and distributing agricultural products.

**vision statement**

# table of contents

Mission Statement	1
Table of Contents	2
Executive Summary	3
<b>Chapter 1: Introduction and Background</b>	5
Document Introduction	7
Context	8
<b>Chapter 2: Process, Inventory and Analysis</b>	9
Chapter Introduction	11
Process	11
Inventory	12
Examples Elsewhere	13
Single Factor Inventory Maps	15
Analysis	25
Combined Factor Analysis Maps	27
<b>Chapter 3: Recommendations</b>	31
Chapter Introduction	33
Describing a Planned Development District	33
LIFE Zone Close Up Maps	35
Implementation Plan	41
Policy and LIFE Zone Identification	41
Business Expansion and Technical Assistance	42
Financing and Incentives	44
Tables for Implementation	46
Local Financing Table	47
State Financing Table	48
Grant Financing Table	49
Implementation Table	51
<b>Chapter 4: Conclusions &amp; Next Steps</b>	53
Chapter Introduction	55
Renderings of LIFE Zone	56
<b>Appendices</b>	61
Appendix A: Planning Development Districts Background and Guidelines	63
Appendix B: Summary of Stakeholder Meeting	70
Appendix C: Detailed Map Technical Analysis	71

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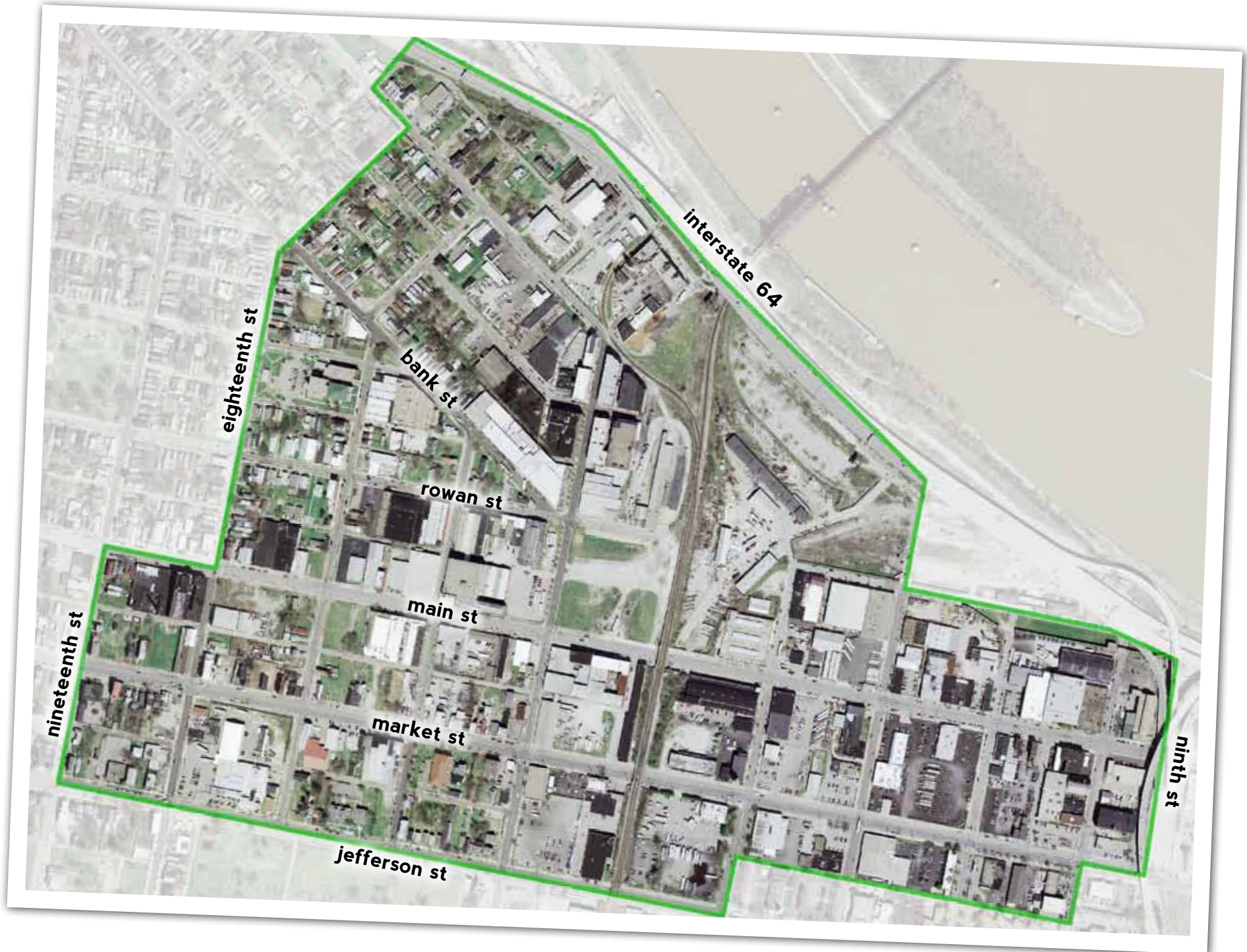
# executive summary

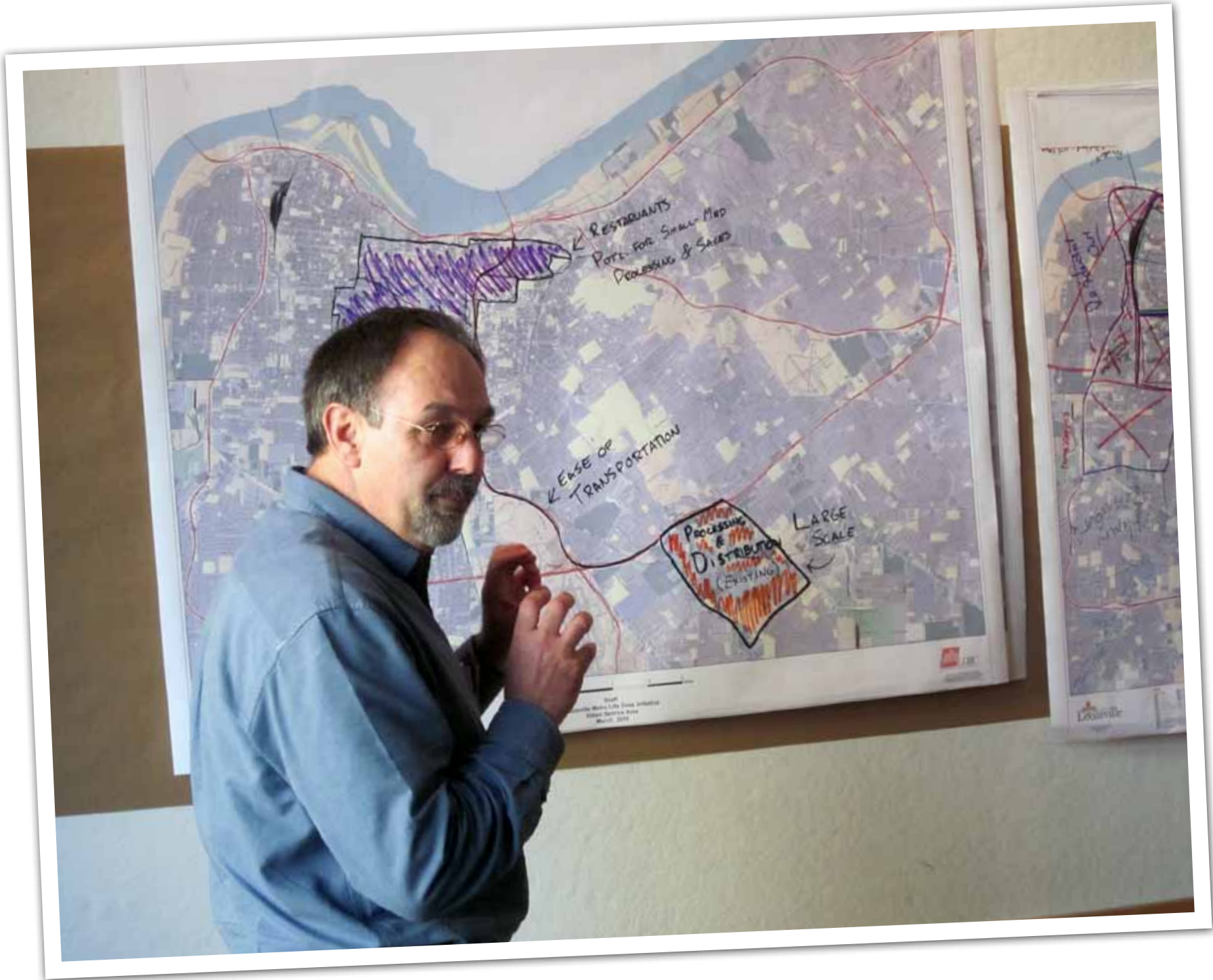
In January 2011, at the request of the Office of the Mayor of Metro Louisville, the Master of Urban Planning Capstone Studio at the University of Louisville agreed to study the feasibility of establishing a Locally Integrated Food Economy Zone (LIFE Zone). The LIFE Zone will create a vibrant, local food economy by establishing a hub where food growers, producers, and processors collaborate and share resources to maximize benefits. By eliminating barriers and providing incentives, the LIFE Zone will create jobs in an array of businesses related to local food. The LIFE Zone's ancillary benefits will include community development, public health improvement, brownfield remediation, improved environmental sustainability, elevated food security and greater social equity. This study builds upon dozens of previous efforts to establish a locally integrated food economy and positions the city to achieve this goal.

Through complex data analysis coupled with stakeholder input The Capstone Studio determined the LIFE Zone's best location to be bounded by Interstate 64 on the north, West Jefferson Street on the south, Ninth Street on the east, and Nineteenth Street on the West. The Capstone Studio also determined that a Planned Development District would provide the most flexible zoning to eliminate barriers and stimulate activity in the LIFE Zone.

The LIFE Zone's success will be measured by the relocation of companies to the zone and the successful establishment of local food related businesses there. To ensure this success, a business incubation center, staffed by a Technical Assistance Team, will support early-stage businesses seeking to locate in the LIFE Zone. The Technical Assistance Team will be dedicated to helping entrepreneurs develop business plans, procure low interest loans and access credit. The Office of the Mayor should lead a coordinated effort to seek public funding from sources including the Kentucky Agriculture Development Fund and the U.S. Department of Agriculture's Rural Development. These efforts should be coordinated with additional funding from private foundations, nonprofits, and micro-lending initiatives.

**Opposite Page:** The boundaries of the LIFE Zone took shape over the course of the Capstone Studios work. It is roughly bounded by 9th St. and 19th St. to the east and west, and bounded by I-64 and Jefferson St. at its north and south, respectively.







to City of Louisville  
No Large Animals  
No Multi/Modal  
No Large Parking Lots  
Integration of Existing Neighborhood  
as Stations/w/Electric Small limited:  
Fast Food  
No chain retail/gas/etc/Big Box



# the Louisville LIFE zone

## introduction & background

# document introduction

## DOCUMENT FRAMEWORK

In January 2011, Louisville Mayor Greg Fischer's Office's engaged the Master of Urban Planning Capstone Studio class (Capstone Studio) at the University of Louisville (U of L) to research the concept of a Locally Integrated Food Economy Zone. The Capstone Studio accepted the charge of:



Identifying the LIFE Zone's geographic location;



Researching appropriate zoning for the LIFE Zone;



Illustrating the vision of the effort;



Incentivizing business and stakeholder relocation to the LIFE Zone; and



Recommending policies for implementation steps for the LIFE Zone.

Louisville Metro Mayor Greg Fischer asked the Capstone Studio to envision a cutting-edge, 21st century version of the urban neighborhoods that used to exist around local agricultural enterprises. The administration imagined a neighborhood built around local food - a place where farmers could bring in their crops to distributors, processors and a public market; a place where locals could find good jobs rooted in all aspects of local food economy; a vibrant neighborhood full of shops, restaurants, and backyard gardens; a zone that would offer businesses financial incentives and technical support. In short, it would be a hub where many kinds of entrepreneurs would cluster, collaborate, compete and create new job opportunities supportive of the local food system.

Subsequently the Capstone Studio was given the task of determining what this new zone would be, where it would be located and what types of activities would take place there. The Capstone Studio gathered input from stakeholders, entrepreneurs, visited sites, analyzed research and data—all with the goal of creating an effective framework for a new Locally Integrated Food Economy Zone, or LIFE Zone, to develop and grow in.

The following report is the product of this process and discovery.



# context

The LIFE Zone project is part of a larger effort in Louisville to grow an efficient local food economy system. The Capstone Studio used the following studies to inform the recommendations in this report:

**Building Louisville's Local Food Economy:** Strategies for Increasing Kentucky Farm Income through Expanded Food Sales in Louisville

**Bridging the Divide:** Growing Self-Sufficiency in our Food Supply; Community Food Assessment, A Regional Approach for Food Systems in Louisville, Kentucky.

**The State of Local Food:** A Snapshot of Food Access in Louisville

**Louisville Metro Neighborhood Market Drilldown Study:** Catalyzing Business Investment in Inner City Neighborhoods

**West Louisville Competitive Assessment and Strategy Project:** Creating Jobs, Income and Wealth in the Inner City

**Bringing Kentucky's Food and Farm Economy Home:** Community Farm Alliance 2003.



Above: Early in the process, the Capstone Studio gathered input from community leaders and interested parties.





**the louisville LIFE zone**  
**process, inventory and analysis**

# introduction

The Capstone Studio followed a time-honored procedure to develop this feasibility study. First, the Capstone Studio created a preliminary project vision statement based on conversations with local stakeholders. The Capstone Studio then began a progression of inventory, analysis and synthesis. This process provided a rational framework within which to gather and evaluate data, establish goals and recommend strategies for successful implementation of Louisville's LIFE Zone.

## process

### Inventory

During the inventory phase the Capstone Studio gathered information related to the stakeholders' collective vision. This array of existing-condition data was diverse, targeted and sufficient to enable thorough and actionable recommendations and conclusions. In order to determine the "Who", "What", "Where" and "How" of the LIFE Zone, the Capstone Studio identified study criteria.

To varying degrees, urban agricultural initiatives touch on issues of economic development potential, urban core rehabilitation, social equity, environmental justice and sustainability, brownfield remediation, community revitalization, urban infrastructure optimization and local food security. The Capstone Studio researched and collected information pertinent to all of these issues from the following sources:

- U.S. Census data for Metro Louisville population demographic data;
- Jefferson County GIS data layers;
- Literature and internet reviews of urban agriculture initiatives;
- Aerial photographs;
- Stakeholder interviews;
- Site visits; and
- Stakeholder workshop.

### Analysis and Synthesis

During the analysis and synthesis phase, step two of the process, the Capstone Studio reviewed, sorted, evaluated and organized the collected Inventory data. This phase allowed the Capstone Studio to begin to identify Metro Louisville areas with the potential to satisfy the physical and infrastructure needs of a variety of LIFE Zone participants. Concurrently, the analysis identified and mapped areas of the city most in need of beneficial social, public health and environmental intervention.

The Studio then synthesized the information in preparation for making recommendations.

### Recommendation

The third and final process step involved determining the feasibility of the LIFE Zone. This holistic approach provides answers to:

- The "Where," through recommended location maps;
- The "How," through a set of policy and land use/zoning recommendations and incentives; and
- The "When," through a set of suggested next steps.

This strategy optimizes the potential for early, easily-developed partnerships and successes. Harvesting these low-hanging fruits ensures maintaining momentum for such a complex and broad-reaching effort.

## PROJECT ROAD MAP

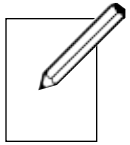
**start**

hold  
community  
meeting



**step1**

take inventory



**step2**

analyze & synthesize



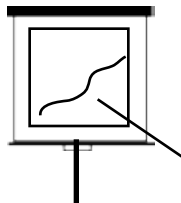
**step3**

make  
recommendations



**step4**

complete report &  
make presentation



# inventory

During the inventory phase, the Capstone Studio gathered information from the following sources as a way to begin to piece together the puzzle of the LIFE Zone:

## Stakeholder Meeting

More than 30 stakeholders attended a LIFE Zone workshop on March 19, 2011. The stakeholders comprised a broad group of entrepreneurs, advocates, government officials and academics interested in local food. The workshop's goals were to determine the location of the LIFE Zone, identify desired uses, incentives and next steps. Stakeholders participated in the following activities:

- Visual preference survey and discussion to determine land uses;
- Map exercise to identify the location of the LIFE Zone; and
- Small group exercises to determine incentives and recommendations

## Interviews

The Capstone Studio interviewed more than twenty stakeholders during the inventory phase of the process. Stakeholders include agricultural entrepreneurs, spokespersons of institutions, academics, advocates, government employees, citizens and policy makers.

## Site Visits

The Capstone Studio participated in tours of:

- Tasman property on Barret Avenue;
- East Portland and Grasshoppers Distribution; and
- Grateful Greens campus.

## Government

The Capstone Studio accessed the following government resources:

- Property Value Assessments;
- Vacant land and structures;
- Publicly owned land and structures;
- Tax incentives;
- Government loans and other financing mechanisms;
- Kentucky Proud Businesses;
- Aerial photos; and
- Census Data.

**food for thought**

Obtaining locally-grown food is often difficult in neighborhoods where poverty is high and people have limited vehicle access. These areas are called "Food Deserts."

## examples elsewhere

Urban agriculture exists to serve a community's appetite for local fresh food, build community and provide jobs. Urban agriculture initiatives are gaining momentum all across the United States. From community gardens to farmer's markets, providing better access to fresh food for the underserved while creating economic opportunities for growers, processors and distributors is an important objective of these initiatives.

Due to the growing popularity of urban agriculture, cities have been reviewing their current public policies, zoning codes and comprehensive plans to address urban agriculture. Social justice, economic development and city policy toward local food systems are all important aspects of the urban agriculture movement. The Capstone Studio studied all of these aspects and compiled the following summary of other cities current urban agricultural initiatives.

**look!**  
at what other  
cities are doing!

### Greenworks Philadelphia

Greenworks Philadelphia is Mayor Michael A. Nutter's initiative to make Philadelphia the greenest city in the nation. The project consists of 15 sustainability targets for the city focusing on energy, environment, equity, economy, and engagement. Specifically, Target 10 falls under the equity umbrella is to bring local food to within 10 minutes of 75% of Philadelphia's residents. They plan to accomplish this by:

- Creating Green Resource Centers within Fairmount Park that provide seedlings, materials and technical expertise to residents who want to grow their own gardens;
- Turning park land into farmland and partner with local civic groups to create more urban farms and farm stands; and
- Inventory city land holdings and identify parcels that are suitable for growing food to simplify the complexity of accessing publicly-owned land.

#### Successes- to-Date:

- The Mayor's Office released a progress report in May of 2010, detailing the progress for each of the 15 targets by assigning a percentage of completion. The percentage of completion for all 15 targets was 44% complete.

### The Baltimore Sustainability Plan:

In March of 2009 the Baltimore City Council adopted The Baltimore Sustainability Plan as an element of the comprehensive plan. The plan focuses on integrating three elements of sustainability: social equity, social health and environmental stewardship, into every decision the city makes. The city's sustainability plan calls for a Greening Goal to establish Baltimore as a leader in sustainable, local food systems. The strategy for accomplishing this goal is to increase the amount of land used for agricultural production, improve selection at food outlets, develop a specific urban agricultural plan, create a food policy task force, and collect data about the local food system.

#### Project Strategies:

- Preventing pollution;
- Conserving resources;
- Creating a green economy;
- Improving transportation; and
- Promoting education and public awareness.

#### Successes to date:

- 2010 - First Food Policy Director hired
- 2010 - Food Policy Advisory Committee created

## Diggable City Project: Portland, Oregon

In Portland, city officials believe that urban agriculture should be addressed in the city's zoning codes and that any codes pertaining to urban agriculture should focus on the potential impacts and therefore should pay special attention to smells, transportation, noise, pollution, livability and parking in areas where urban agriculture is to be zoned. To make it easier to provide fresh local food to residents, codes were written to provide for retail sales as an accessory use to the main agriculture activities. This would improve access by eliminating the requirement of obtaining conditional use permits to sell goods on site.

### Project Strategies:

- Develop an inventory management plan;
- Expand the inventory and development evaluation criteria;
- Create an urban agriculture commission;
- Adopt a formal policy on urban agriculture;
- Conduct a comprehensive review of policies and zoning obstacles.

### Successes-to-date:

- 2006 – Dedication of Hazelwood HydroPark in the Hazelwood Neighborhood. Developing master plan for tree planting, recreational park and community gardens;
- 2007 – Verde Native Plant Nursery awarded a \$25,000 EPA Brownfields Program assessment grant for master planning. Nursery to be a community-driven project to deliver environmental jobs, training and entrepreneurial opportunities to residents of Hacienda Community Development Corporation.

## Growing Power: Milwaukee, Wisconsin

Growing Power, Inc. is a community-based agriculture powerhouse that works to develop food secure communities across Milwaukee and the nation. Growing Power holds workshops to share their success with groups around the country who want to create healthy food systems in their hometowns.

### The goals of Growing Power are to:

- Grow Food;
- Grow Minds; and
- Grow Community.

Growing Power's outreach activities in the community fall into 3 categories:

- GROW - Projects and Growing Methods – share their methods with others through workshops and demonstrations;
- BLOOM – Education and Technical Assistance – offering technical assistance to farmers, offering youth programs, and working on urban agricultural policies; and
- THRIVE – Food Production and Distribution – providing food through the Rainbow Farmers Cooperative, the Farm to City Basket Program, and sales to numerous groceries, restaurants and farmers markets

### Successes-to-Date:

- Growing Power has established itself as a national model of success in community-based agriculture;
- Growing Power has developed satellite training sites in Arkansas, Georgia, Kentucky, Massachusetts, and Mississippi; and
- On April 11th, 2011 Growing Power announced that they will be working on an initiative with the city of Milwaukee to create 150 full-time Green Jobs for low income residents.

## The Five Borough Farm Project: New York, New York

Five Borough Farm is a project of the Design Trust for Public Space and Added Value, a Brooklyn-based non-profit that operates one of the city's largest farms, to create a citywide plan to support urban agriculture in New York City. Policy makers are currently reluctant to make the policy changes necessary to expand New York's urban food production because they lack the data needed to fully understand the benefits of urban agriculture as a land use. The Five Borough Farm team will collect the necessary data on current agriculture in NYC and develop measurable goals to quantify urban agriculture's benefits to the city. Additionally they will make policy recommendations that they believe will bolster the growth of New York's agricultural activities.

### Project Strategies:

- Create more sustainable food production;
- Assist with youth development;
- Promote better health for people in the neighborhoods; and
- Influence city policy so that laws, funding, zoning and city programs support the growth of urban food production

### Successes-to-date:

- Hosted Five Borough Farm: The Future of Farming in NYC, a citywide workshop with over 90 attendees, in December 2010

figure no. 1 - single factor inventory

# population density

Population density means the concentration of people by census tract. A goal of the LIFE Zone is to maximize the benefits of a sustainable local food economy to the greatest number of people.

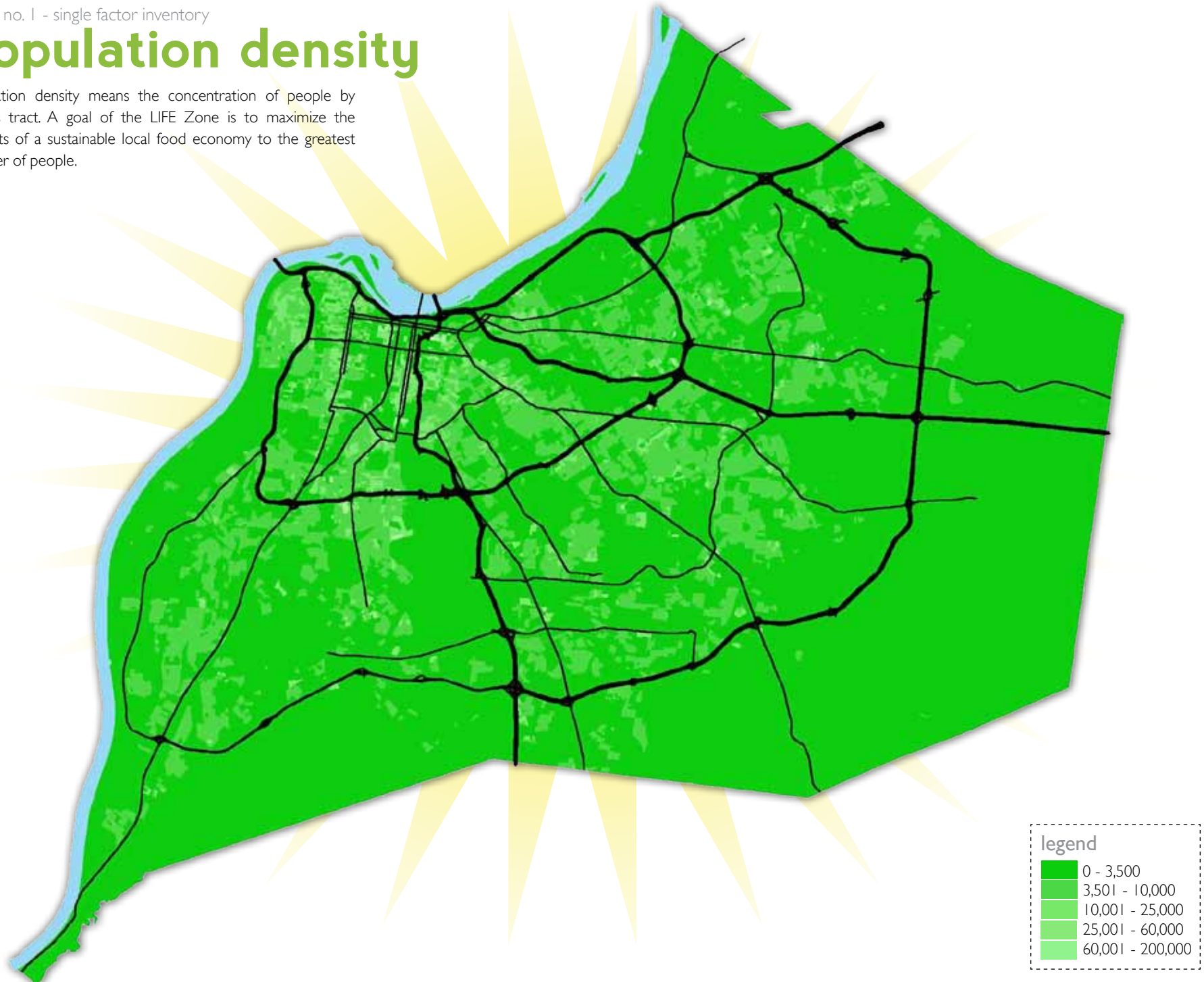




figure no. 2 - single factor inventory

# median income

Median income means the midpoint of income for households in Louisville/Jefferson County. A goal of the LIFE Zone is to provide employment opportunities to low-income areas.

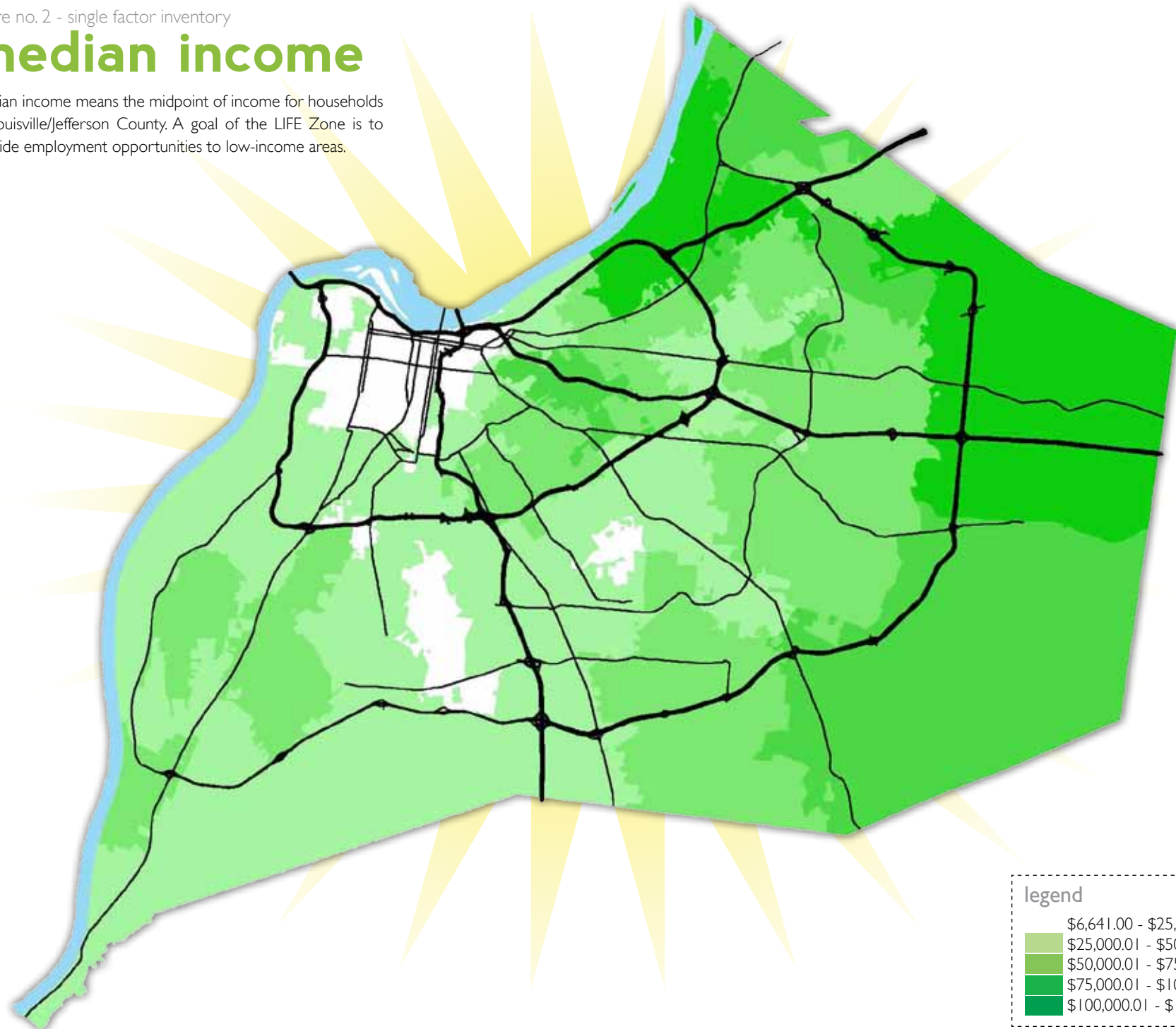


figure no. 3 - single factor inventory

# vacant properties and parcels

Based on data from the Louisville Metro Department of Inspections, Permits and Licenses, the Capstone Studio derived this map of vacant structures and parcels. The LIFE Zone should have an ample supply of land ripe for redevelopment.

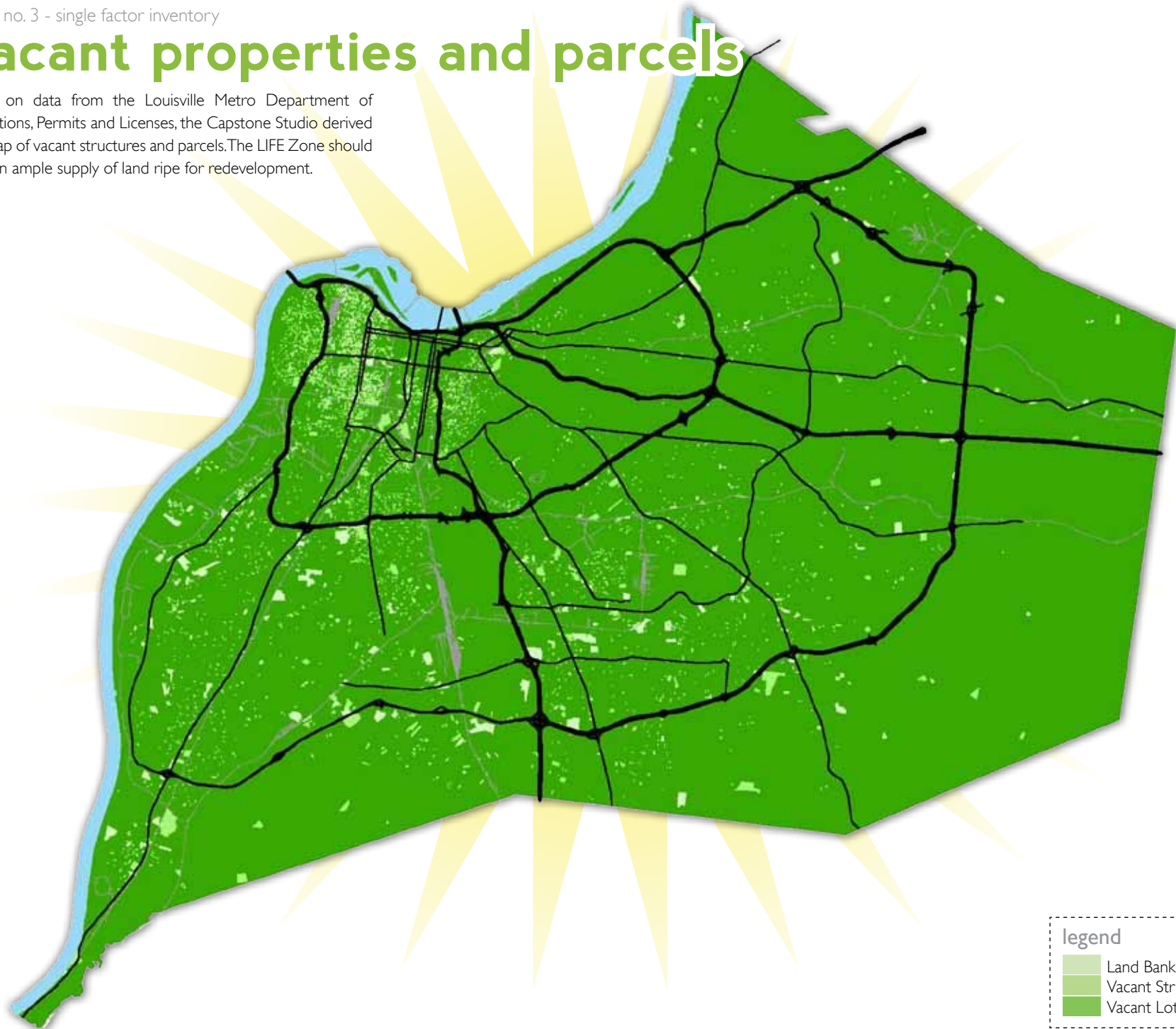


figure no. 4 - single factor inventory

# potentially available land

Based on information compiled from a variety of sources, this map looks at potentially available land in Jefferson County based on the public ownership of land.

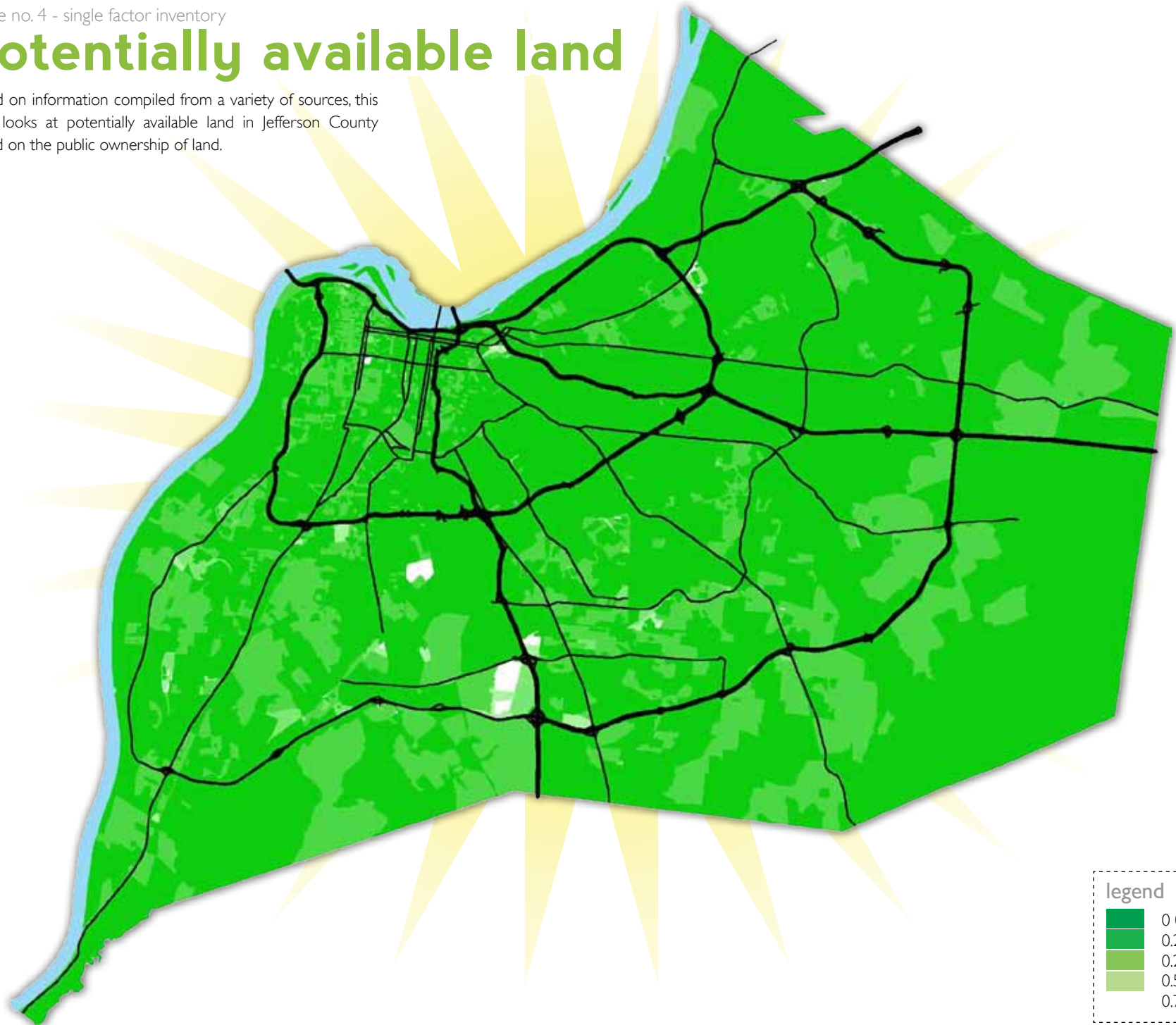


figure no.5 - single factor inventory

# existing local food businesses

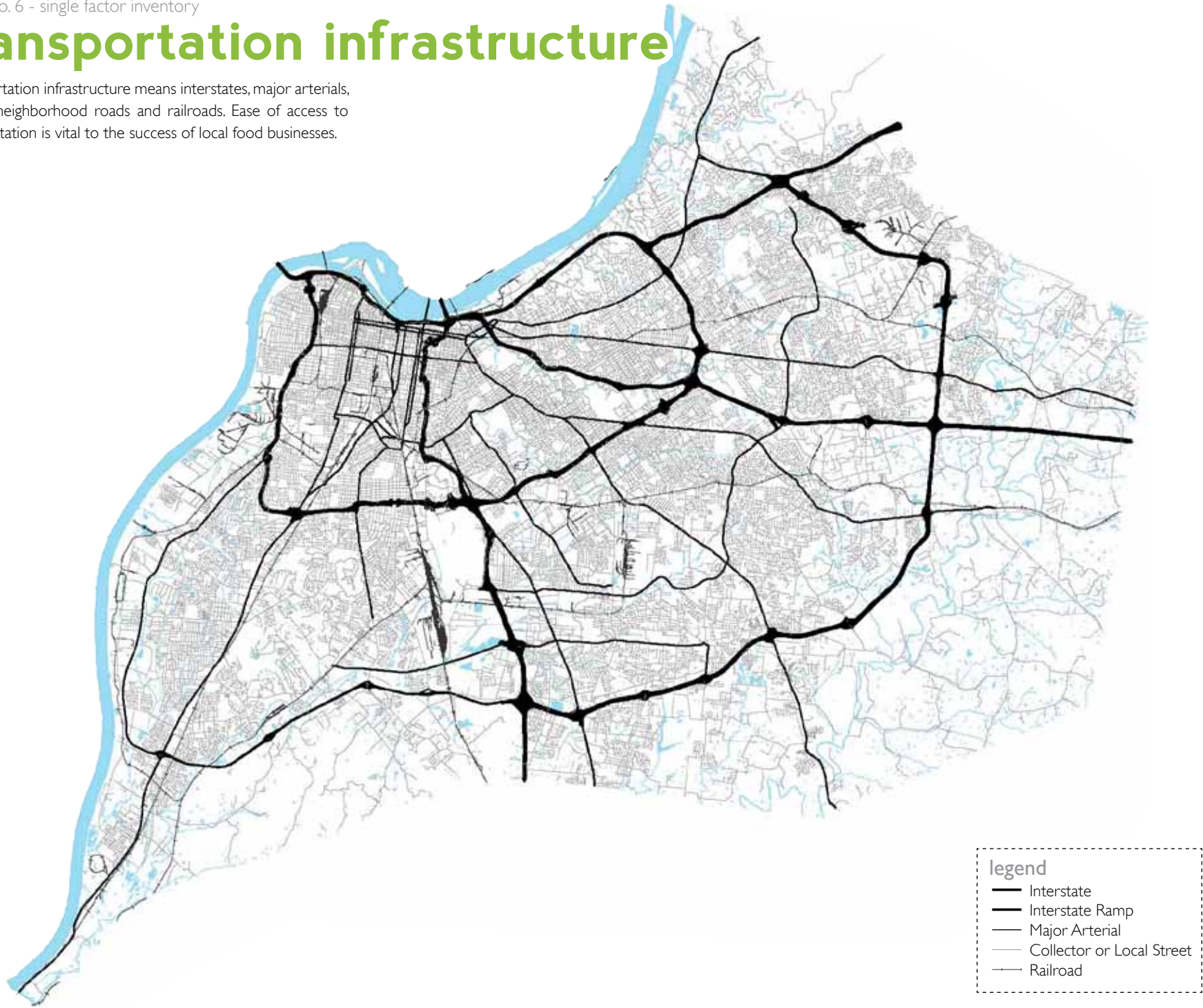
This map shows businesses currently involved in the local food economy. The Capstone Studio chose this criterion because of the beneficial synergies of locating the LIFE Zone near existing local-food friendly businesses.



figure no. 6 - single factor inventory

# transportation infrastructure

Transportation infrastructure means interstates, major arterials, smaller neighborhood roads and railroads. Ease of access to transportation is vital to the success of local food businesses.



legend

- Interstate
- Interstate Ramp
- Major Arterial
- Collector or Local Street
- Railroad

figure no. 7 - single factor inventory

# vehicle access by household

Vehicle access is crucial to determining where Food Deserts may exist. This map takes a look at where the lowest vehicle access in Jefferson County is.

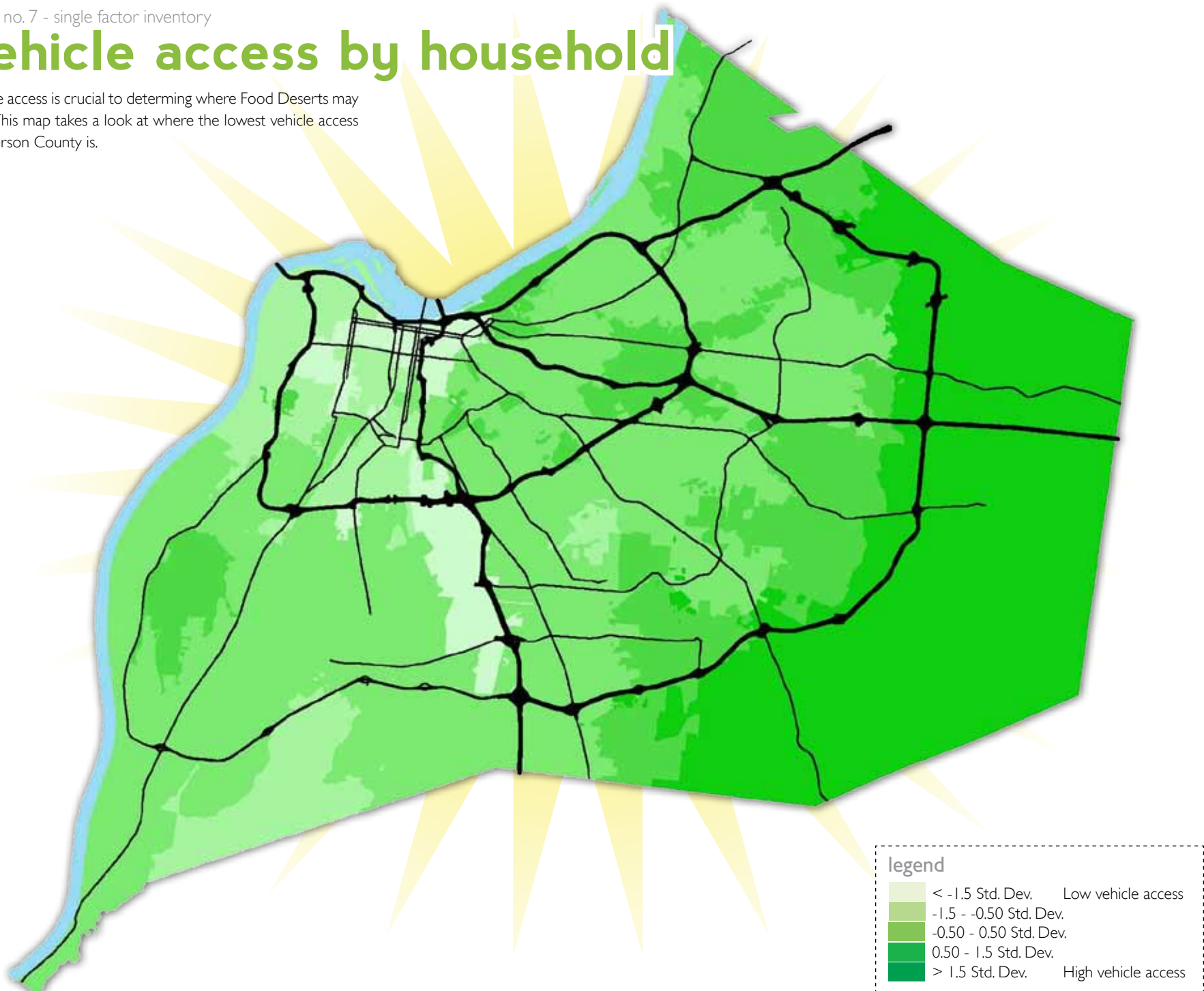


figure no. 8 - single factor inventory

# food access

Food access is a measure of proximity to full service grocery stores and vehicle access. A goal of the LIFE Zone is to increase access to fresh food and vegetables.

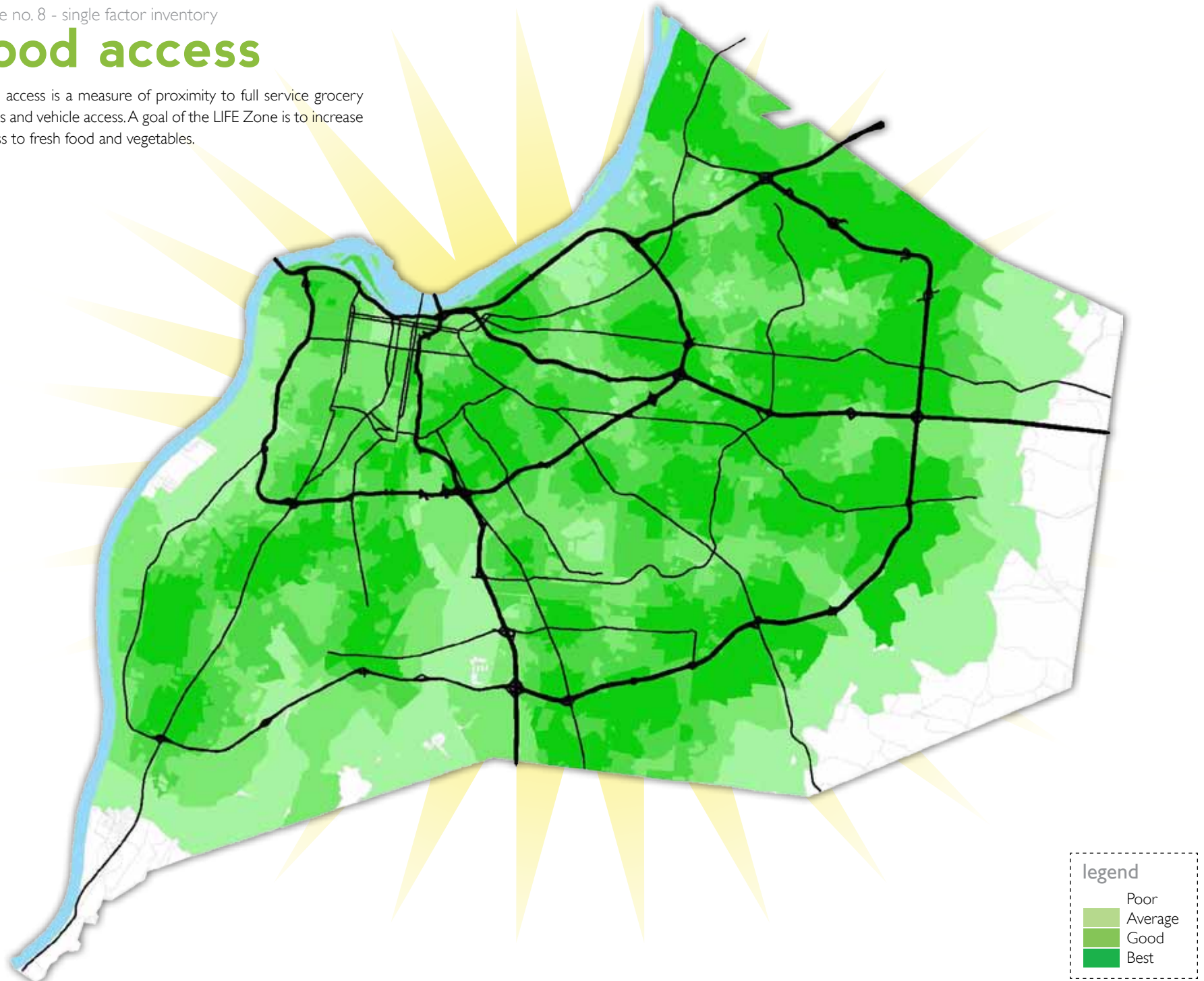


figure no. 9 - single factor inventory

# workshop identified zones

Stakeholders at the community meeting broke into five groups to identify their ideal LIFE Zone locations.

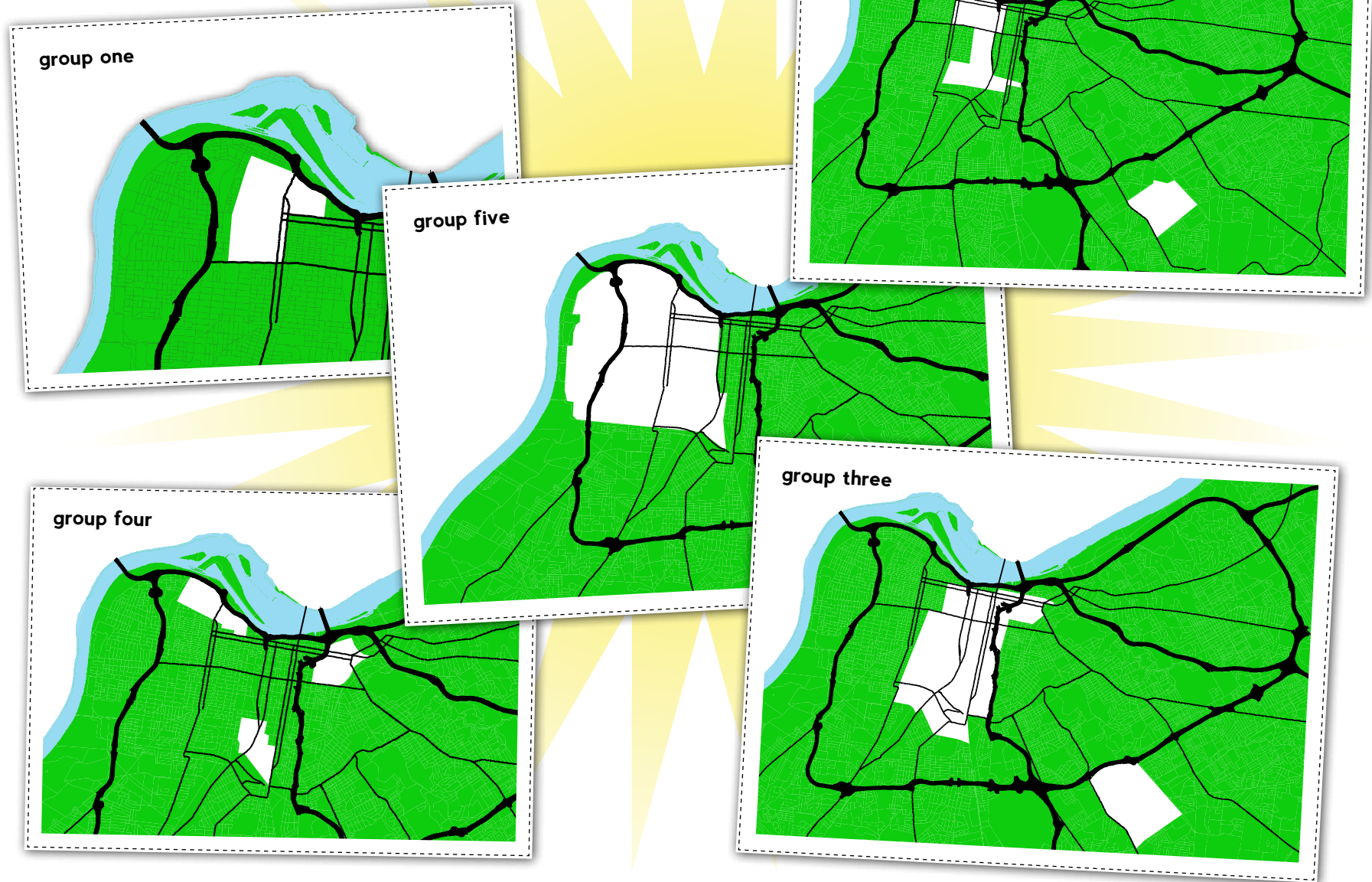
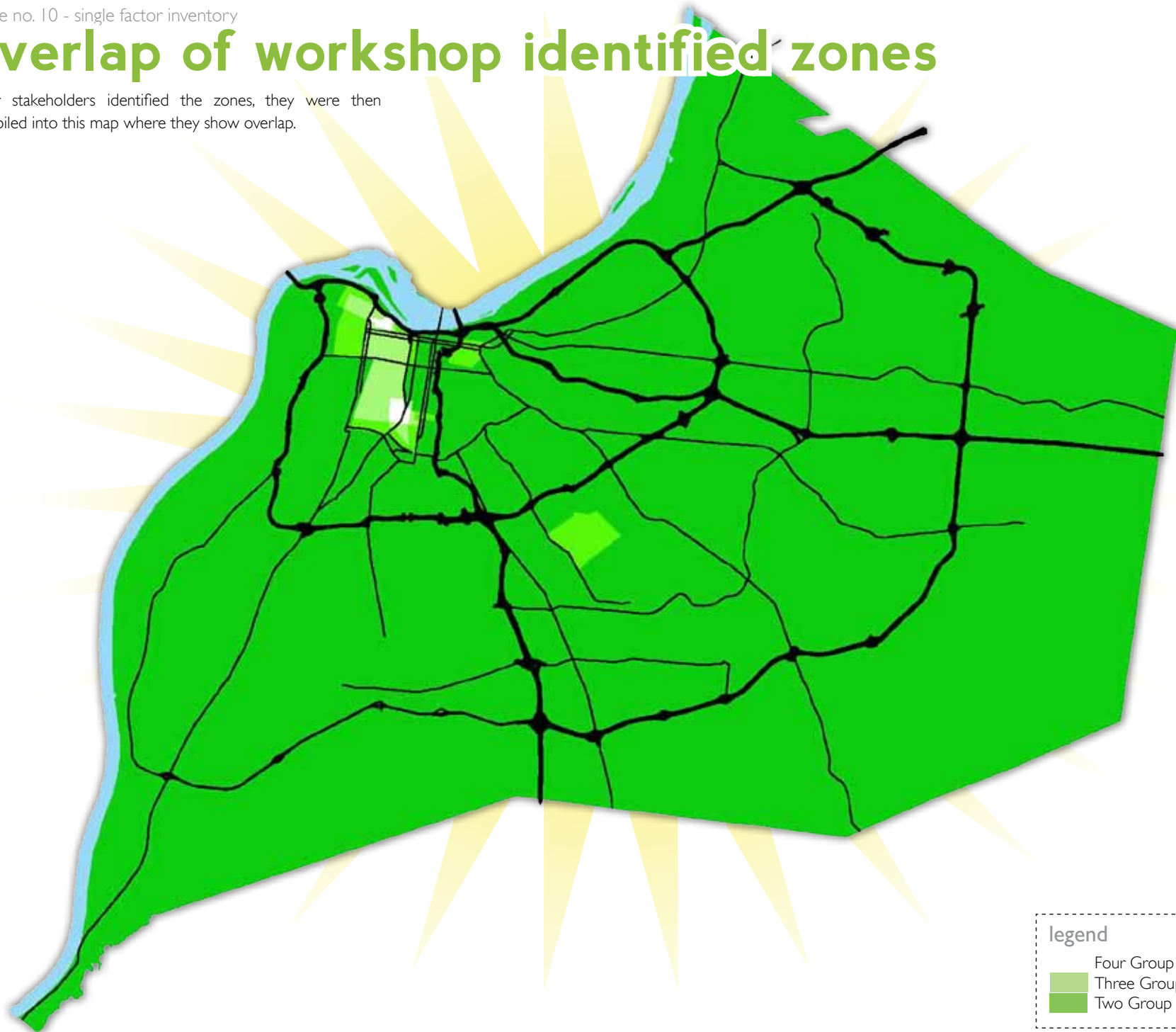




figure no. 10 - single factor inventory

# overlap of workshop identified zones

After stakeholders identified the zones, they were then compiled into this map where they show overlap.



# analysis

## Population Density (Figure No. 1)

This map uses a five-tiered scale to illustrate access to food for all areas of Jefferson County. In this graduated scale, white depicts areas with the worst food access and the darkest color indicates the areas with the best food access. The majority of areas labeled worst are located along the edges of the county, particularly at the southeastern edges. The majority of areas labeled best are generally located near an interstate or major arterial road. Areas labeled poor, average, or good are dispersed throughout the county with no individual region appearing to have a significantly greater barrier to food access than any other region.

## Median Income (Figure No. 2)

This map depicts median household income per 2000 census block separated into five divisions. In this graduated scale, the lightest color indicates the lowest income segment and the darkest color indicates the highest income segment.

The two lowest income segments are in the areas west of I-65 and south of I-264. Much of the city west of I-65 is in the lowest income segment. With few exceptions, median income gradually increases moving east from I-65, with the eastern boundaries having the highest income segments.

## Vacant Property and Parcels (Figure No. 3)

This map examines where vacant land exists. The LIFE Zone should have a supply of land that allows for redevelopment. This map however does not include under-utilized land and structures. The varying shades of green show where opportunities exist.

## Potentially Available Land (Figure No. 4)

To arrive at this figure, the studio joined the vacant and government owned parcels to the appropriate blocks giving an amount of available acreage per block. Next, the studio divided the acres of available land by the acres in each block to establish a ratio of available acreage per census block. The Capstone Studio used five divisions with 0 indicating none of a block is available then increasing by .25 for each of the following four divisions. The highest division, 0.76-1.0, indicates that 76 to 100 percent of the block is available

**food for thought**

Data is readily available, but the Capstone Studio had to do some digging for the good stuff.

### Existing Local Food Businesses (Figure No. 5)

This map displays the locations of Kentucky Proud businesses (excluding restaurants) and food and beverage manufacturers by 2000 census blocks. The categories (0, 1, 2 and 3) reflect the number of such businesses in a census block. This map may be deceptive in this countywide view because it tends to obscure areas such as downtown where high densities of small blocks containing food-related businesses are difficult to see when surrounded by numerous blocks without food businesses.

Areas with the strongest food business presence are located east of I-65. Locations west of I-65 with a strong food business presence are generally located south of Broadway and south of Algonquin Parkway.

### Transportation Infrastructure (Figure No. 6)

This map depicts roads represented by solid lines and railroads represented by lines crossed by shorter perpendicular lines.

### Vehicle Access by Household (Figure No. 7)

The map indicates, by census block, the percent of households with one or more vehicles. The households with the lowest percentage of vehicle owners are located in west Louisville. This area is roughly bordered by South Preston Street to the east, Algonquin Parkway and Eastern Parkway to the South, South 22nd Street to the West and the Ohio River to the north. The lowest percentage of any census tract is 28%.

Lack of vehicle ownership may indicate an impediment to food resources. People who rely on public transit do not have the same travel flexibility as vehicle owners, making it more difficult to travel to grocery stores, farmer's markets and other sources of food products. The Capstone Studio considered these issues in determining the location of the LIFE Zone.

### Food Access (Figure No. 8)

The food access map displays access to grocery stores. Access means proximity to grocery stores in conjunction with automobile access. The Capstone Studio assigned a 70% weight to distance from groceries and a 30% weight to automobile access.

This map uses a five-tiered scale to illustrate access to food for all areas of Jefferson County. In this graduated scale, white depicts areas with the worst food access and the darkest color indicates the areas with the best food access. The majority of areas labeled worst are located along the edges of the county, particularly at the southeastern edges. The majority of areas labeled best are generally located near an interstate or major arterial road. Areas labeled poor, average, or good are dispersed throughout the county with no individual region appearing to have a significantly greater barrier to food access than any other region.



figure no. 11 - combined factor analysis maps

# cluster map analysis

The studio combined a rating composed of food access, food business, percent of available land, density and income to generate this map.

A higher z-score indicates that a site is better suited for the LIFE Zone based on the factors considered. Lighter colors indicate higher scores. West Louisville contains a high concentration of census blocks rated in the top three divisions of LIFE Zone suitability. Eastern Jefferson County has a large portion of census blocks least suitable for the LIFE Zone.

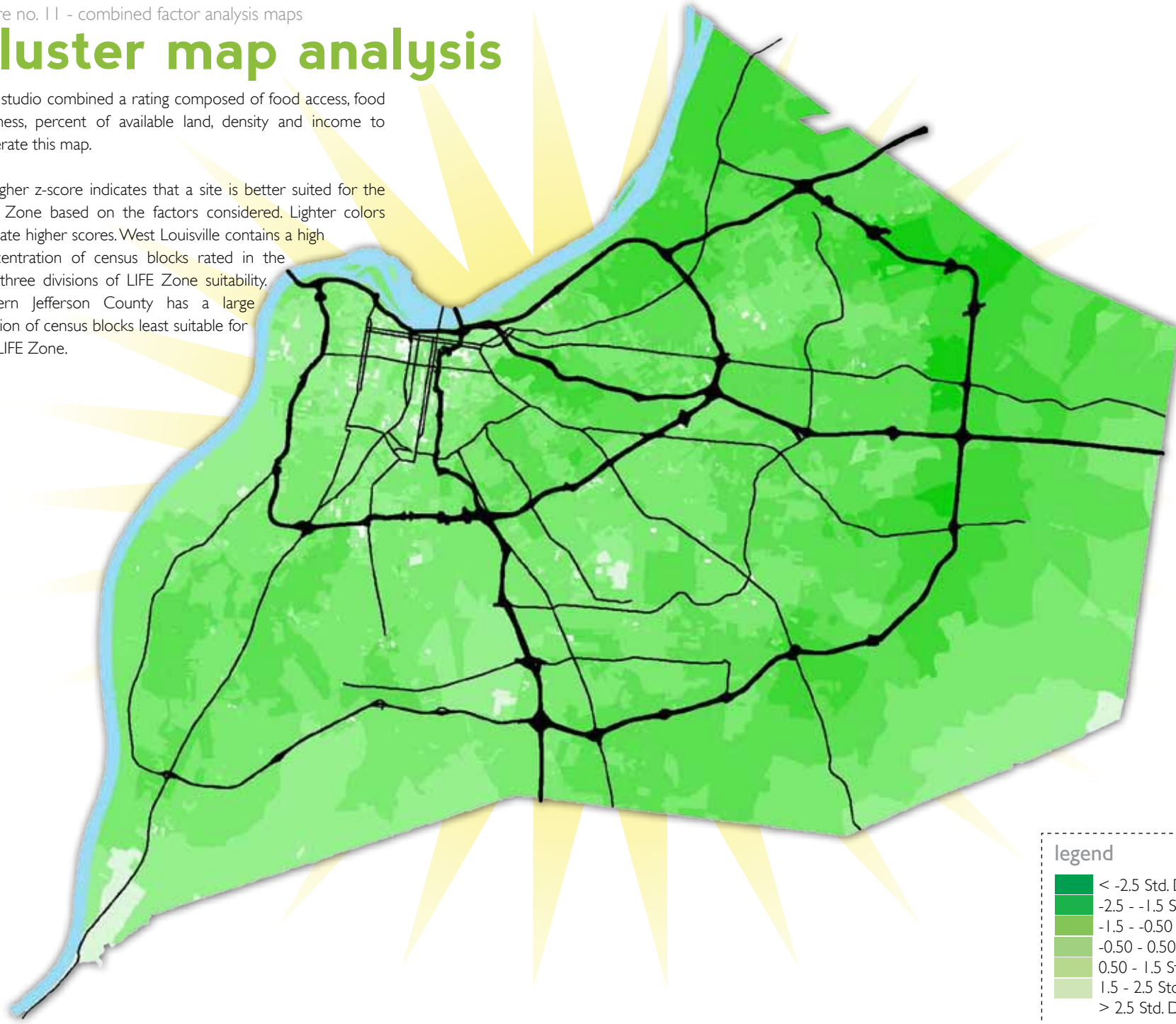


figure no. 12 - combined factor analysis maps

## composite map

This map depicts the cluster analysis with descriptive terms replacing the z-scores with assigned terms: worst, bad, neutral, good and best, to describe each census block's LIFE Zone suitability.

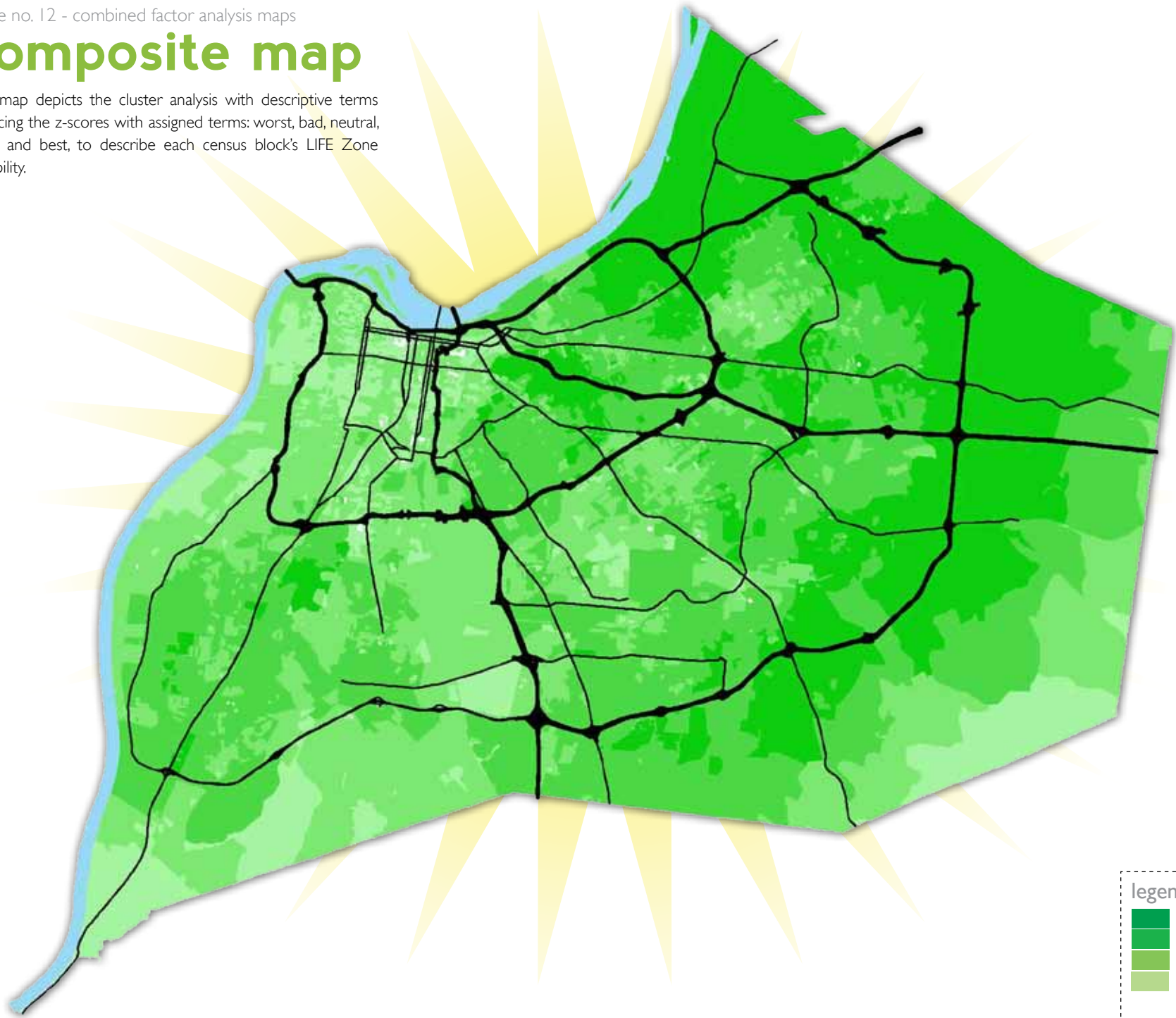


figure no. 13 - combined factor analysis maps

# proposed life zone alternatives

This map shows the three alternative zones for the LIFE Zone.

They are:

- A Portland/Russel Neighborhood
- B East Market/East Downtown
- C Park Hill Corridor

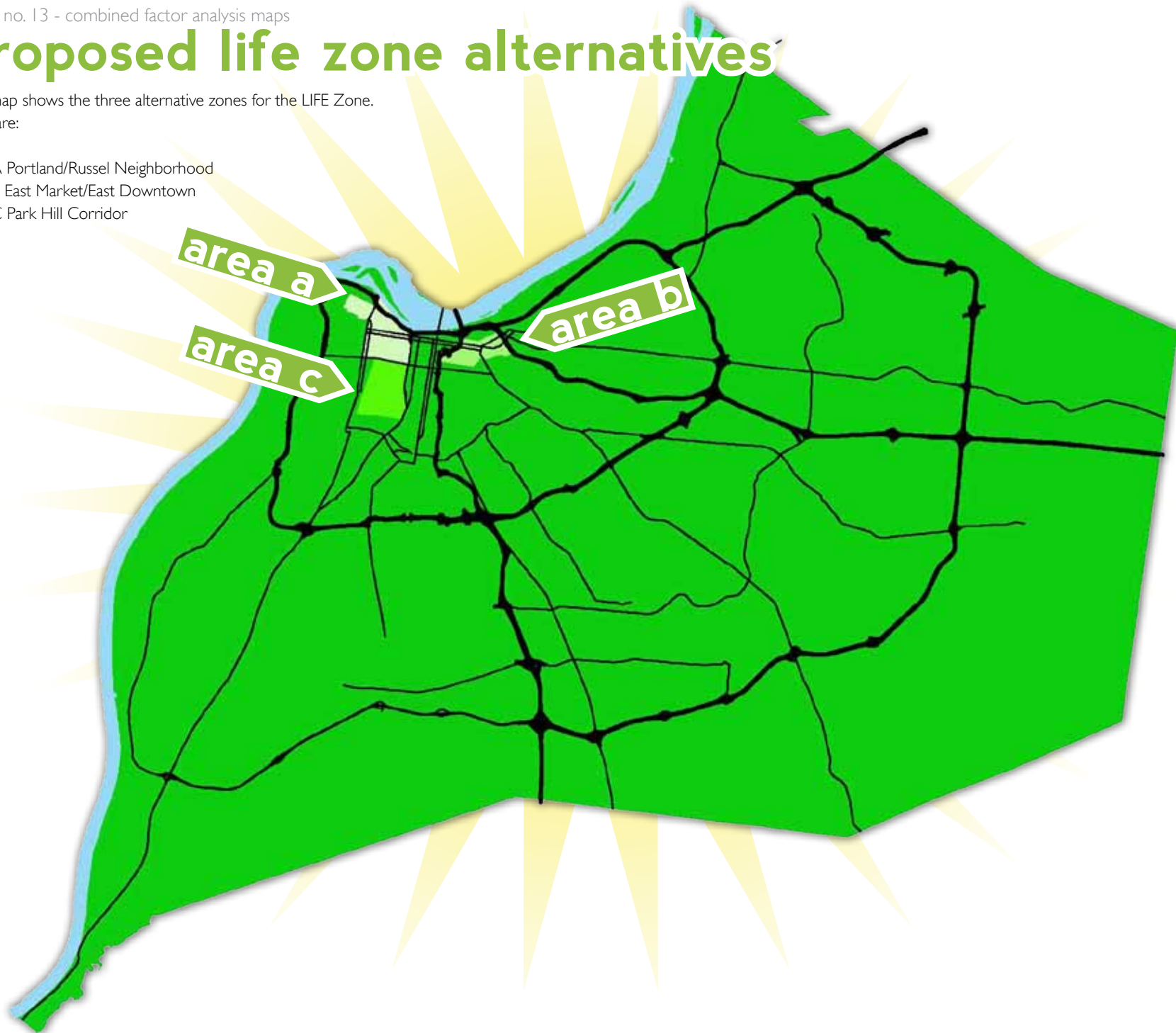
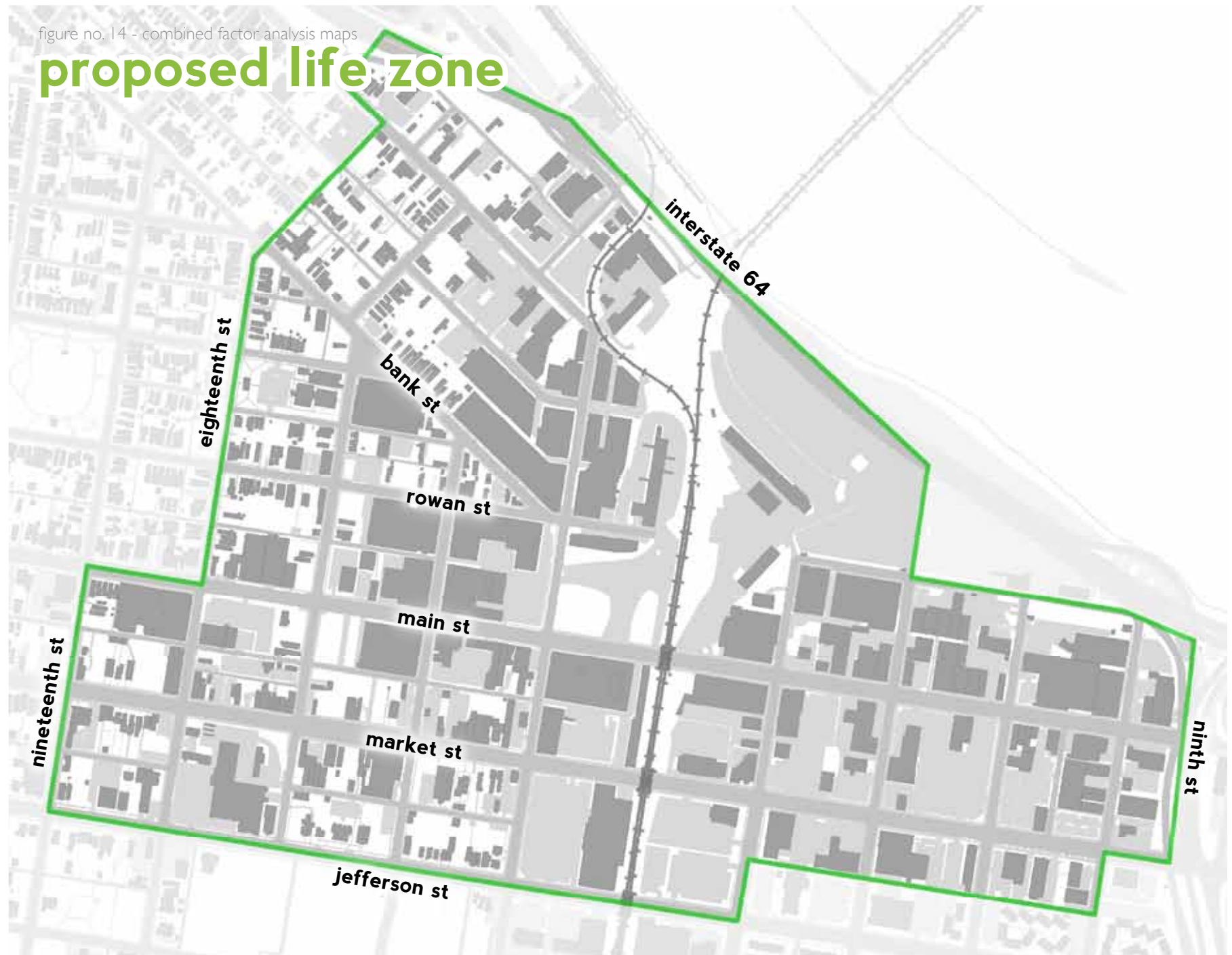


figure no. 14 - combined factor analysis maps

# proposed life zone









**the Louisville LIFE zone  
recommendations & implementation**

# introduction

After thorough research, conversations with experts and analysis, the Capstone Studio's primary recommendation is that a comprehensive PDD or Planned Development District would be the best approach for implementing the LIFE Zone, as well as the provision of funding from various grants and sources. This chapter summarizes the recommendations of the Capstone Studio.

## describing a planned development district

### ADVANTAGES OF A PDD

The LIFE Zone should be zoned as a Planned Development District (PDD). A PDD is an independent, freestanding zoning district with its own zoning regulations. It offers a number of advantages that otherwise would not be possible with traditional zoning conditions.

#### Flexibility



A PDD provides flexibility in regulating land use development and encourages land use innovation by allowing different land uses to be combined in different ways that are often different from contemporary land use practices.

#### Efficiency



PDDs also enhance efficiency in land use and improve a municipality's ability to promote business and employment opportunities. Since the PDD is a separate zoning district, where landowners do not have to apply for Planning Commission approval for permitted uses.

#### Smaller Barriers



For landowners who want to work within the PDD framework, they avoid the expense of time and effort that often comes with applying for a zoning change.

#### Enabling a Planned Development District

The LIFE Zone will be zoned as a Planned Development District (PDD). A PDD is an independent, freestanding zoning district with its own zoning regulations. A PDD provides flexibility in regulating land use development and encourages land use innovation by allowing different land uses to be combined in innovative ways that are often different from contemporary land use practices. PDDs also enhance efficiency in land use and improve a municipality's ability to promote business and employment opportunities. Since the PDD is a separate zoning district, landowners do not have to apply for separate Planning Commission approval for permitted uses. This eliminates a substantial barrier for landowners who want to work within the PDD framework, as it avoids the expense and effort of applying for a zoning change.

Louisville Metro's Land Development Code (LDC) provides for a PDD under Chapter Two, Section Eight. The PDD must target specific goals and objectives. The PDD is an effective tool for guiding development in ways that support community goals and priorities and meshes with the goals of Louisville's Comprehensive Plan, Cornerstone 2020.

The PDD allows owners of several medium-sized or smaller lots to work together; using community provided development options, to consider development outside of the current LDC regulations. However, development pattern of any proposed PDD must be consistent with the applicable form district pattern and the land area subject to the PDD must comprise at least two acres.

#### How to apply for a PDD

Applicants seeking a zoning change to a PDD must request it from the local zoning authority, which then reviews and either approves or denies the change in accordance with KRS100 and the local zoning code. For more information about KRS100, please refer to Appendix A. Property owners, the Planning Commission, or the legislative body with zoning authority over the property may apply for the PDD. The application for the PDD must state its purpose, contain standards for site and building development and describe a process for reviewing and approving individual projects. Applicants should take care to involve landowners, developers and neighbors and inform them as well as possible of the community's intentions, objectives, standards and any necessary mitigating measures or other provisions that would assure harmony with surrounding land uses.

The LDC requires the applicant to host at least one public meeting prior to filing an application to amend the zoning map to a PDD. At least fourteen days prior to the meeting, the applicant must provide written notice of the meeting to Planning Commission staff, owners of first and second tier properties of the proposed development site and any persons the Planning Staff deems appropriate.

### Issues to Consider in Proposing and Drafting a Planned Development District Plan

The PDD must have its own development plan, which must include a Planned Development Use Map and a Land Use Category Table. The Planned Development Use Map outlines the location of different land use categories within the PDD's geographic boundaries, while the Land Use Category Table provides descriptions and use listings for the PDD's land use categories, including permitted, limited and conditional uses.

The PDD Development Plan must also include:

- A statement of the PDD's purpose and intent and the justification for the zoning request, including a statement of how the PDD proposal complies with the comprehensive plan;
- Written or graphic site design standards specifying the permitted range of lot sizes, lot coverage, setbacks and maximum building heights for all uses or use categories;
- Optional provisions such as impervious surface ratios or building coverage ratios;
- Architectural design standards applicable to all new construction and expansion of existing structures
- Sign guidelines; and
- Other design standards that the Planning Commission or legislative body deems necessary.

The PDD must offer greater public benefit and a better site design than traditional zoning. In order to encourage excellence in design, a PDD may include a variety of incentives, including the potential for bonus densities and greater flexibility in zoning standards.

### PDD Recommendation

A LIFE Zone PDD would enable local food production, community health, community education, garden-related job training, environmental enhancement, preservation of green space and community enjoyment on sites for which urban gardens represent the highest and best use for the community. To ensure the success of the PDD, Planning and Design Services should consider the guidelines detailed in Appendix A.

figure no. 15 - life zone close up

# existing form districts

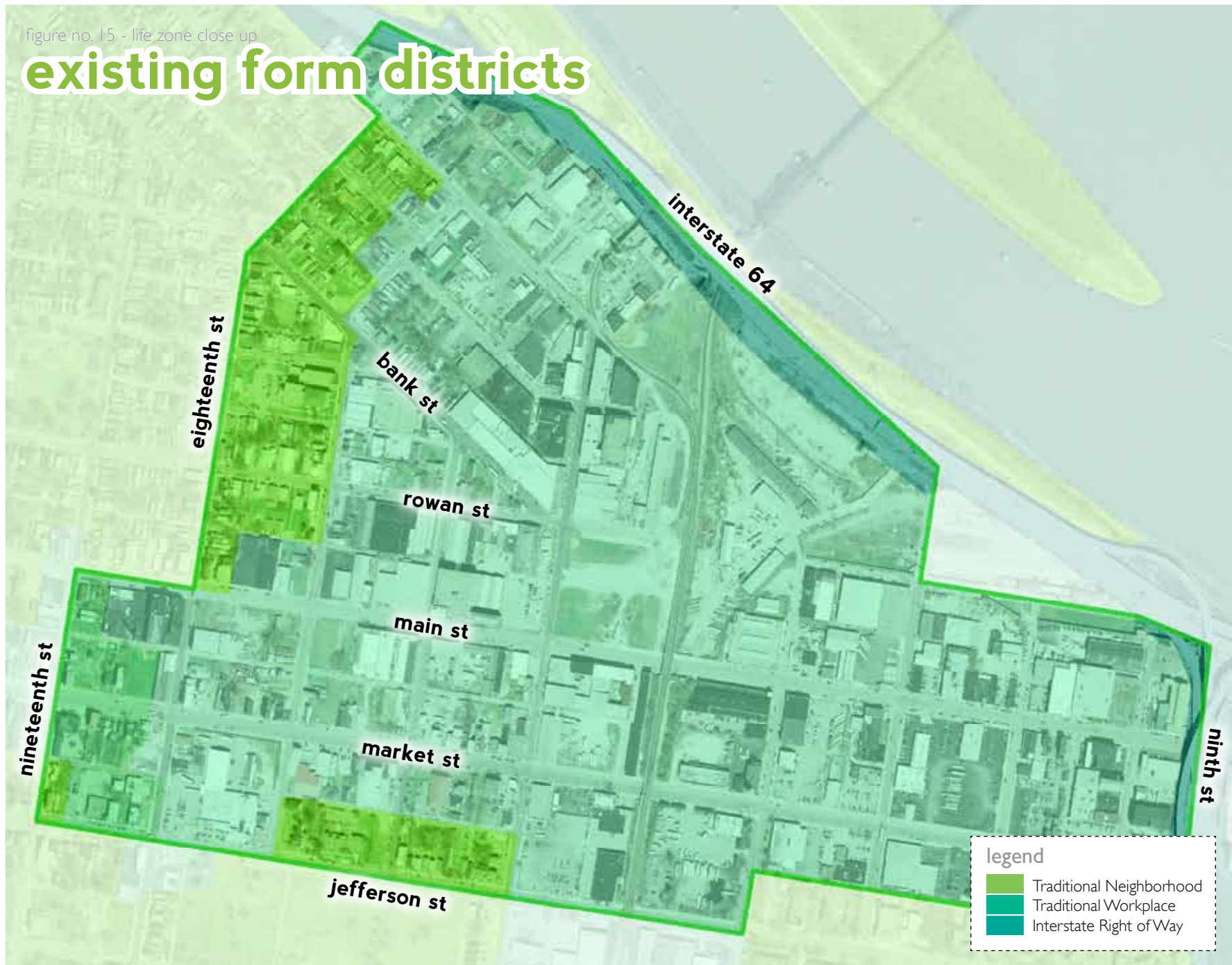


figure no. 16 - life zone close up

# existing zoning

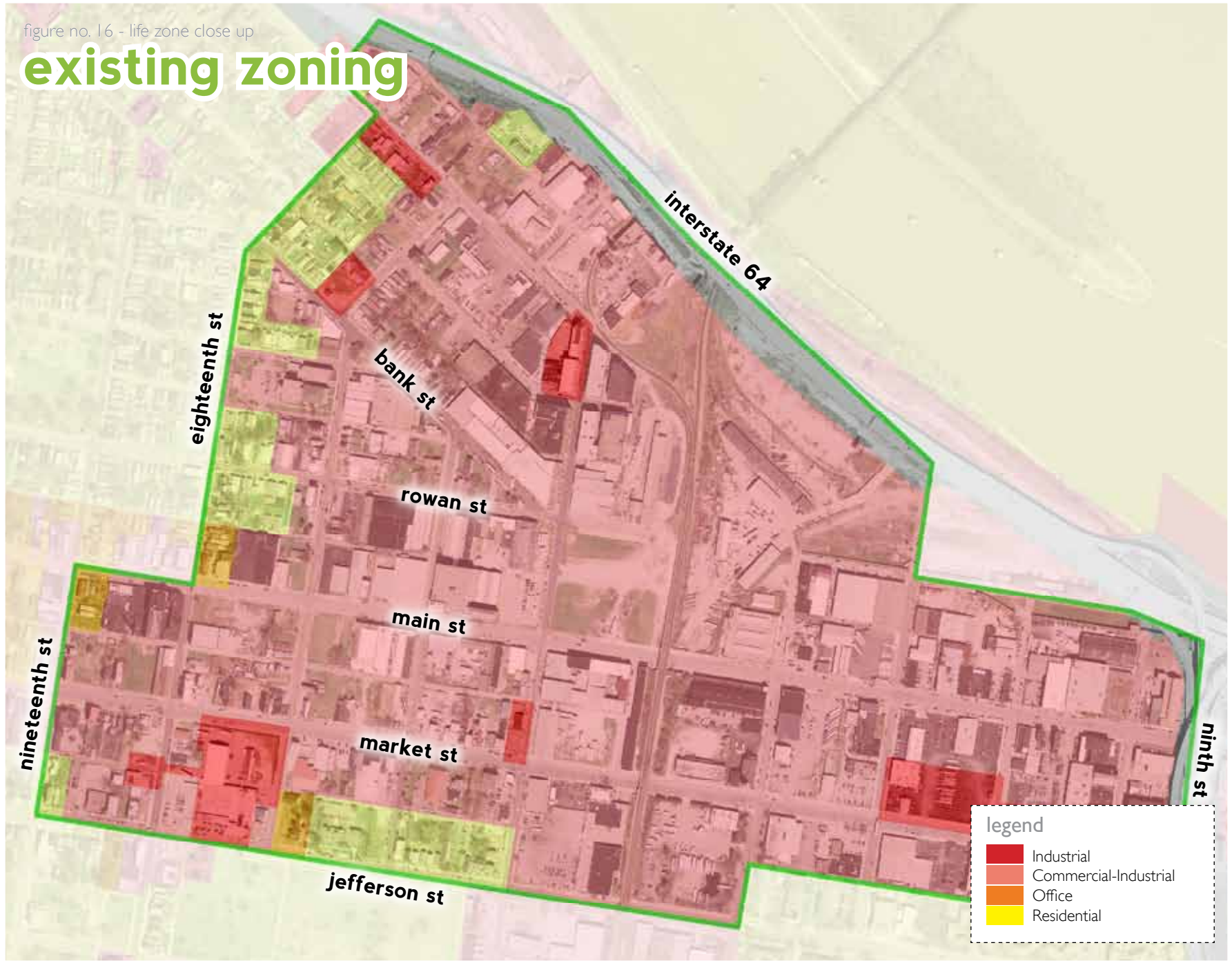


figure no. 17 - life zone close up

# existing property lines

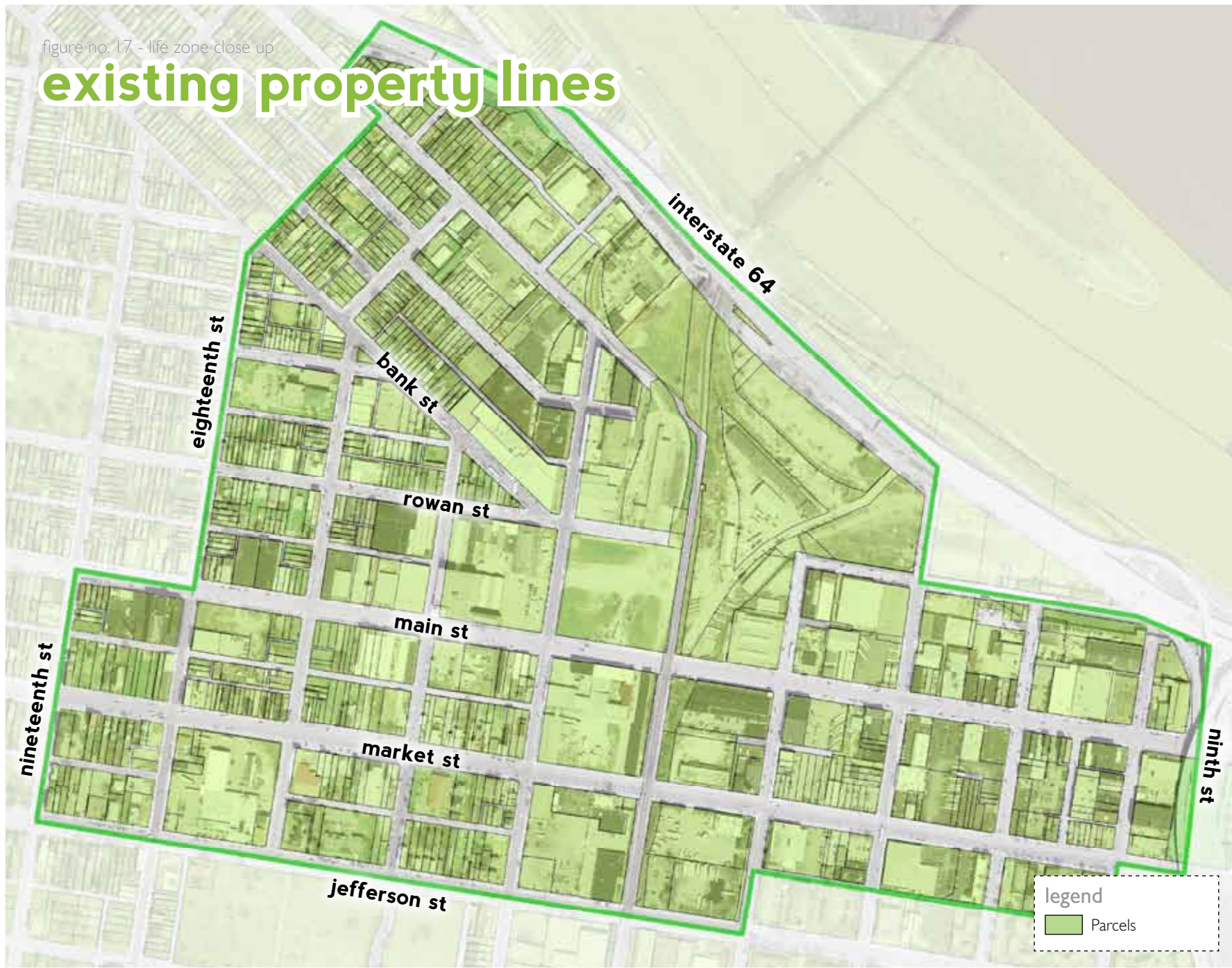


figure no. 18 - life zone close up

# land opportunities



figure no. 19 - life zone close up

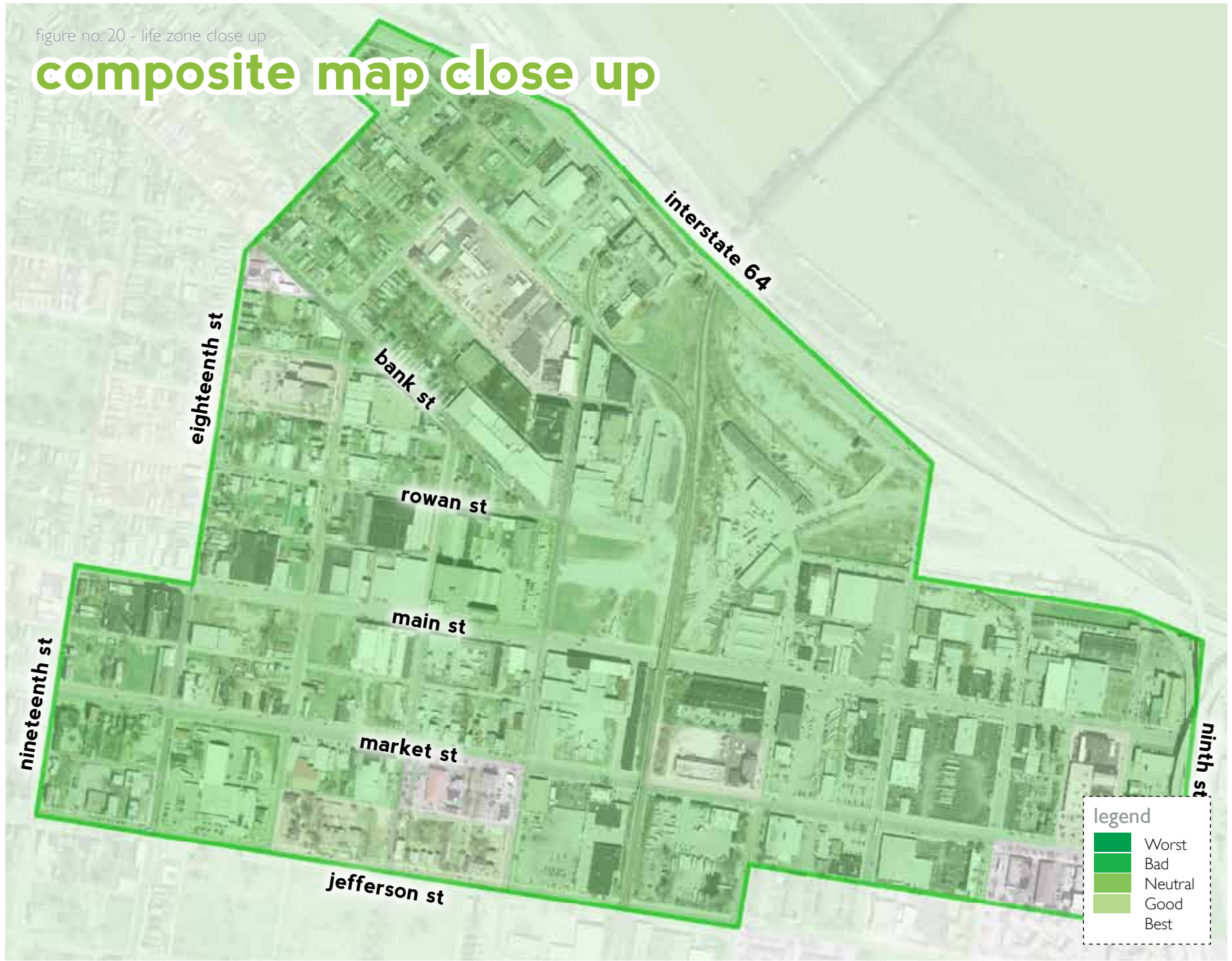
# neighborhood & political boundaries





figure no. 20 - life zone close up

# composite map close up



# implementation plan

The next step to completing the LIFE Zone is to implement the zone through a series of initiatives and projects over time. The implementation plan is outlined in detail below.

## policy and life zone identification

### **Build upon existing assets.**

In order to garner the most “buy in” from current stakeholders involved in the local food economy, this report recommends that Mayor Fischer recruit those stakeholders to contribute to LIFE Zone activities and Friends of the LIFE Zone Activities.

### **Define “Local Food”**

The Louisville Metro Food Policy Council will define “local food” and recommend that Louisville Metro Council adopt that definition for purposes of the LIFE Zone.

### **Formalize the LIFE Zone**

This report recommends a primary location for the LIFE Zone. Using input from the Local Food Policy Council, Louisville Metro Government should formally identify the LIFE Zone.

### **Sponsor a Planned Development District (PDD) for the LIFE Zone**

Once the LIFE Zone is identified, Louisville Metro Government should identify a sponsor to create a PDD through the Planning Commission. Louisville Metro Planning and Design services should be partner in this process.

### **Create a “Friends of the LIFE Zone” Designation**

The Food Policy Council should create a “Friends of the LIFE Zone” designation in order to boost support from existing local food economy stakeholders who may not be located in the LIFE Zone. The designation could confer similar

benefits upon Friends of the LIFE Zone as are enjoyed by LIFE Zone businesses and residents.

### **Appoint a “Local Food Coordinator”**

The mayor should appoint a Local Food Coordinator to establish a clear vision for a sustainable local food economy and coordinate Metro government, the private sector and the non-profit sector and other stakeholders in local food endeavors. The Local Food Coordinator should draft a well articulated local food economy plan and coordinate efforts among Louisville’s local food stakeholders. Improved coordination will ensure that local food stakeholders invest more resources for businesses and programs interested in promoting local food.

### **Target growth of Louisville Metro’s local food system as a primary economic development strategy.**

A strong local food system would drive economic growth. Specifically, the city should target: 1) food and dairy processing and distribution; 2) a year-round indoor farmer’s market; and 3) business incubation.

### **Create a local food economy website and utilize social media outlets.**

The Office of the Mayor in conjunction with the LIFE Zone Technical Assistance Team should create a one-stop website for the LIFE Zone. Many stakeholders in the local food economy are not aware of local food events and opportunities in Louisville, and a website would be a highly effective way to spread the message. This in conjunction with the use of social media, such as Twitter, Facebook, Flickr, and LinkedIn could bolster the website further.

**friends**  
it makes your  
business more  
marketable

## business expansion & technical assistance

### **Purchase equipment for a certified, community test kitchen in the LIFE Zone.**

To create value-added products for LIFE Zone entrepreneurs and farmers, Louisville Metro Government should purchase the equipment necessary to create a certified, community test kitchen. LIFE Zone-certified businesses and organizations would have access to the kitchen in order to clean, cut, cook, bake and refine agricultural products grown in and delivered to the LIFE Zone.

### **Create an internship team to support the Local Food Policy Council and LIFE Zone activities.**

The LIFE Zone intern team would provide low-cost staffing to assist the Local Food Policy Council and Louisville Metro Government as it develops the LIFE Zone. Interns could help fill gaps and bring creative insights to the LIFE Zone and in the recently created Food Policy Council, which one person within the Department of Public Health and Wellness currently staffs. Since the LIFE Zone is also a new concept and Louisville Metro Government currently has no staff assigned to implement it.

### **Locate a regional marketing and food distribution center in the LIFE Zone.**

In order to increase the income of farmers across the Commonwealth of Kentucky and generate jobs in Louisville, the LIFE Zone should be home to a regional marketing and food distribution center that receives crops from at least 15 surrounding counties in Kentucky. The center might be home to farmers' markets, coolers, storage space, washing, packing, and grading centers, processing facilities and much more.

### **Establish baseline statistics for the demand of locally-grown foods.**

Partner with the Community Farm Alliance to collect statistics on fruit and vegetable production, direct sales of locally-grown products to restaurants and the demand for locally produced dairy, meat, fruits and vegetables. These statistics will allow for the identification of barriers to lowering the price of locally sourced foods.

### **Test soils within the LIFE Zone for food production.**

Louisville Metro Government should apply for an Environmental Protection Agency grant to test the soils in the LIFE Zone for contamination as safety of the products derived from the zone is paramount to its success. The LIFE Zone should also contain greenhouses, hoopouses and urban gardens that allows food to be grown in a safe, contained environment.

### **Using Louisville Metro Land Bank properties, create a large urban garden demonstration project in the LIFE Zone.**

Led by the Jefferson County Agriculture Extension Office, the Land Bank Authority, Louisville Metro Government, JCPS and the School of Urban and Public affairs, the LIFE Zone Technical Assistance Team should create a large scale urban farm in the LIFE Zone. To assure the safety of food production on land bank properties, the technical assistance team should work with consultants to test the soil and prepare the site for productive use.

## business expansion & technical assistance (cont.)

### LIFE ZONE TECHNICAL ASSISTANCE CENTER

Located in the LIFE Zone, the Business Incubation and Technical Assistance Center should consist of two to four staff members with marketing, planning, development and local food or community-based agriculture backgrounds. Roles and responsibilities of the LIFE Zone technical assistance team should include:



#### **Project Manager:**

Acts as the primary liaison between businesses seeking involvement in the LIFE Zone, Louisville Metro Government and other local food stakeholders. Responsible for planning, executing and closing all LIFE Zone projects. A key task will be to attract or create jobs in the LIFE Zone. Should have experience in cultivating relationships with the business community.



#### **Economic Development Officer(s):**

Responsible for developing projects to support local business growth and create new jobs. Assists in writing loan applications and funding proposals. Cultivates relationships and provides project-specific support to businesses that express interest in being part of the LIFE Zone.



#### **Public Interest Broker:**

Develops market information on locally grown foods and their price points. Builds upon the work of Louisville's Farm to Table Initiative.



#### **Grant Writer:**

Determines schedule of possible grant application submissions and writes at least one application per month to potential funders in order to sustain the technical assistance team's efforts.



#### **Intern(s):**

Provides general support to the technical assistance team. Focus on innovative financing mechanisms to launch LIFE Zone activities.

#### **Focus Initially on Early-stage Business Incubation Technical Assistance.**

Rather than traditional enterprise zone tax incentives, the LIFE Zone's primary, initial incentives should be the availability of technical assistance with early-stage business and expansion functions. These include: business plan development, marketing, relocation, site selection, planning, zoning administration, grant writing and shared use of facilities for food storage, processing and distribution. To support this effort, the Capstone Studio recommends that the mayor's office establish a Business Incubation & Technical Assistance Center (Center), where a team would work to accelerate the development of businesses that source local foodstuffs. The Center would give priority to innovative companies and businesses seeking to locate within the LIFE Zone and projects that increase the amount of locally-grown foods from producers to consumers.

The Center should also focus its resources on value chain support including aggregation, processing, distribution and transportation. The LIFE Zone's ability to eliminate inefficiencies in the supply chain will make farmers and food producers more competitive and lower the unit cost of their products. This program will increase the LIFE Zone's attractiveness and be a key to its success in creating a stronger local food economy.

Private and public sector investment and access to credit for LIFE Zone businesses will be necessary components of the LIFE Zone's success. Based on dozens of interviews with local food stakeholders, the Capstone Studio determined that lack of access to capital is a barrier to sourcing more locally grown foods and to producing locally grown foods. The Capstone Studio recommends that the mayor recruit private sector investors to raise \$500,000 of seed capital for the LIFE Zone. That capital could be used to move businesses into the LIFE Zone or establish a small business incubation site within the LIFE Zone.

## financing & incentives

### **Only Consider State Enterprise Zone Tax Incentives in the Long-Term.**

Generally, the Kentucky State Legislature must drive or approve enterprise zone tax incentives. The original enterprise zones expired twenty years after their inception and Louisville's enterprise zones expired in 2003. Because authorizing additional enterprise zones through the legislature would be time consuming and require significant political capital, the Capstone Studio believes this would be an ineffective strategy for the LIFE Zone in the short term. However, in the long-term, Louisville Metro's Delegation to the State Assembly should pursue a strategy to enable or renew an enterprise zone based on its ability to increase Kentucky Farm income.

### **Enlist high-net-worth, private-sector individuals to fund and promote LIFE Zone Activities.**

Dozens of interviews with existing stakeholders attributed the lack of access to capital as a barrier to sourcing more locally grown foods and to producing locally grown foods. Mayor Fischer should recruit a high net worth individual to secure \$500,000 of seed capital for the LIFE Zone. That seed capital may be used to move businesses into the LIFE Zone and/or establish a small business incubation site within the LIFE Zone itself.

### **Direct other intergovernmental funding to the LIFE Zone.**

The mayor should direct other intergovernmental funding towards the LIFE Zone. The LIFE Zone should be a target area for federal, state and philanthropic sources of funding for which Louisville Metro Government is the fiscal agent. Louisville Metro Government is the recipient of millions of dollars of grants each year. This report recommends that the LIFE Zone should be a target area of a portion of those funds if appropriate. Securing a commitment from Louisville Metro Government on funding would enable LIFE Zone businesses to leverage significant funding from the private sector.

As a guideline, the Capstone Studio recommends that the mayor: 1) target five percent of Community Development Block Grant Economic Recovery funds each year for development of the LIFE Zone; 2) target 2.5 percent of Community Service Block Grant funds to microenterprises that provide opportunities to low-income individuals living and working within five miles of the LIFE Zone; 3) direct city grant writers to write grants focused on supporting LIFE Zone activities; and 4) encourage ten Metro Council members to grant \$10,000 each for use on LIFE Zone-related activities. From July 1, 2011 to June 30 2012, Metro Council neighborhood development funds could be used to improve public infrastructure for LIFE Zone activities.

**think!**  
innovative  
financing leads to  
new economic  
growth

## financing & incentives (cont.)

**Focus on innovative financing mechanisms to launch LIFE Zone activities.**

Private and public sector investment and access to credit for LIFE Zone businesses will be necessary components of the LIFE Zone's success. Based on dozens of interviews with local food stakeholders, the Capstone Studio determined that lack of access to capital is a barrier to sourcing more locally grown foods and to producing locally grown foods. As such, the Capstone Studio recommends that the mayor recruit private sector investors to raise \$500,000 of seed capital for the LIFE Zone. That capital could be used to move businesses into the LIFE Zone or establish a small business incubation site within the LIFE Zone.

**Submit an application to the KY Agricultural Development Board on behalf of the businesses who want to locate in the LIFE Zone.**

The Capstone Studio interviewed numerous stakeholders interested in moving into the LIFE Zone. Louisville Metro Government is encouraged to submit a grant application to the KY Agricultural Development Board on behalf of the businesses, nonprofits, and others organizations interested in locating in the LIFE Zone. A successful funding proposal might establish the LIFE Zone support office, incubation center, certified, community kitchen and more.

**Create a Local Food Angel Investor Network.**

The Office of the Mayor and Greater Louisville, Inc. should form a Local Food Angel Investor Network to identify early stage businesses interested in promoting local food. The network should consist of five to ten large investors who agree to "patient" returns on their investments

**Target Ten percent of METCO loans to local food microenterprise zones.**

The Metropolitan Business Development Corporation (METCO) governs Louisville Metro Government's small business loans. Metro Government should direct ten percent of METCO loans to microenterprises, characterized as those requiring \$35,000 or less in seed capital and five persons or less. The LIFE Zone Technical Assistance Team should dedicate at least one staff person to assist in directing METCO funds to LIFE Zone businesses.

**Apply for a Farmers Market Promotion Program (FMPP) grant.**

The Capstone Studio recommends that the Louisville Metro Department of Public Health and Wellness plan and apply for FMPP grant. FMPP grants help improve and expand farmers' markets. Approximately \$10 million is allocated for federal fiscal years FY11 and FY12.

**Increase farmers' market coordination, expansion and marketing.**

Louisville has a strong farmer's market presence but most farmers market's lack coordination. The Technical Assistance Team and Louisville Metro Government should develop a strategy to increase coordination among existing farmer's markets. The creation of a year round product could be the primary goal of this strategy if feasible.

# tables for implementation

The implementation plan is only the start - the following few pages break down the options of funding as well as how to prioritize the implementation plan. Below are a few quick guides to the tables.

## QUICK GUIDE TO TABLES



### LOCAL FINANCING OPTIONS

By locating in the LIFE Zone, potential businesses could have greater access to local funding. This funding is broken down in Table 1.



### STATE FINANCING OPTIONS

The Commonwealth of Kentucky could also add financial options to benefit businesses in the LIFE Zone. Table 2 breaks down these possibilities.



### GRANT FINANCING OPTIONS

This is a grab-bag of financing options that are potentially available to the LIFE Zone. It includes grants from the private sector and all levels of government. Table 3 shows these options.



### IMPLEMENTATION PLAN

The Implementation Plan outlines the priorities of the LIFE Zone and gives them an order. Table 4 shows the progression of implementation.

## DEFINITIONS OF ABBREVIATIONS

Abbv.	Definition
ED	Louisville Metro Dept. Economic Development
FPC	Food Policy Council
GLI	Greater Louisville, Inc.
HFS	Housing and Family Services
KEDA	Kentucky Economic Finance Development Authority
LMG	Louisville Metro Government
LMPHW	Louisville Metro Public Health Wellness
METCO	The Metropolitan Business Development Corp.
PSB	Private Sector Businesses

# local financing table

table no. 1

Name	Purpose	Eligibility Criteria	Benefit	Contact
Louisville Metro Brownfields Program	Brownfield Redevelopment in older industrial areas	Available in Kentucky Economic Opportunity Zones For remediation, reuse acquisition and assessment. For construction and installation of buildings	Low Interest Loan	METCO
Micro Loan	For start-up businesses	Varies	Low Interest loans ranging from \$10,000 to \$30,000	METCO
Business Loan	For gap financing	Varies	25% of project costs of up to \$100,000	METCO
Small and Disadvantaged Business Loan	For small and disadvantaged businesses	Must qualify as ethnic, minority, disadvantaged or women owned businesses	Provides up to 50% of project costs up to \$100,000 at 5%	METCO
Forgivable Retail Loan	To encourage retail businesses to locate in areas that lack strong retail growth	Varies	Maximum of a \$50,000 loan at 5% interest over five years	METCO
Façade Loan	Neighborhood Revitalization	Varies	Fixed interest rate over ten years	METCO
Accessibility Loan	Making buildings more accessible for people with disabilities	\$5,000 limit for exterior or interior improvements	100% of approved project at fixed 3% interest rate	METCO
Manufacturing Tax Moratorium	Incentivize Manufacturing Companies	New manufacturing companies locating in, or moving into, Louisville Metro	Five year property tax abatement	METCO
Property Tax Assessment and Reassessment Moratorium	Urban Redevelopment	For structures at least 25 years old at 10% or 25% of property value	Tax moratorium for five years	METCO



# state financing table

table no. 2

Name	Purpose	Eligibility Criteria	Benefit	Contact
Direct Loan Program	For land, building and equipment	For non-retail industrial, service industry, agribusiness and tourism projects	Low-interest loans ranging from \$25,000 to \$50,000	KEFDA
Commonwealth Small Business Development Corp	Small business development	For land, buildings, equipment used in projects that meet SBA criteria	Up to 40% of project costs or up to \$1.5 million	KEFDA
Tax Increment Financing	Economic Development	Must demonstrate growth in tax revenues from future development	Bond financing	KEFDA
Industrial Revenue Bonds	For large scale manufacturing projects	Varies—food processing is eligible	State and local governments can raise money on behalf of projects	KEFDA
Kentucky Historic Tax Credit	Historic Preservation	Must be in exchange for investment in the rehabilitation of a historic building	For 20% of qualified rehab expenses	KEFDA
Kentucky Environment Stewardship Act	Large scale projects that impact the environment	Businesses need to manufacture a unique product with a substantial positive impact on the environment. Must have \$5 million in eligible costs	Provides up to 25% of a project's developments cost and 100% of employee skills training.	KEFDA
Kentucky Business Investment Program (KBI)	Manufacturing, Agribusiness, Regional and National Headquarters	Project must create ten new full time jobs. Requires a \$100,000 minimum investment Employee benefit must be 15% of required minimum wage or 90% of new employees must earn \$10.88 to \$12.51	Tax incentives for up to ten years Tax credits of up to 100% of corporate income Wage assessments	KEFDA
Kentucky Industrial Revitalization Act	For the rehabilitation or construction of building, refurbishing or purchasing of machinery or equipment	Investment or rehabilitation of agribusiness operations that are in immediate danger of closing	State income tax credits, Kentucky Corporation License Fee Credits and job assessment fees up to ten years	KEFDA
Voluntary Environment Remediation Property Income Tax Credit	Environmental Remediation	For voluntary remediation of property.	Income Tax Credit of up to \$150,000 per taxpayer granted for expenditures	KEFDA

# grant financing table

table no. 3

Program Name	Awarding Agency	Application Advertised	Advertise Date	Application Due Date
Specialty Crop Block Grant Program	KY Department of Ag	Yes	3/1/11	6/15/11
KY Ag Development Fund	KY Ag Dev Board	Yes	Monthly	5/13/11
CDC's ACHIEVE Healthy Communities Program	Centers for Diseases Control	Varies	Varies	Varies
Community Development Block Grants	Louisville Metro Housing and Family Services	Varies	Varies	Varies
Section 108 Loan Guarantee Program	U.S. Department of Urban Development	Yes	Ongoing	Ongoing
Community Service Block Grants	Louisville Metro Department of Housing and Family Services	No	Varies	Varies
Community Food Projects Competitive Grants Program	Environmental Protection Agency	No	Varies	Varies
Healthy Urban Enterprise Development Center Program	USDA Wallace Center	No	N/A	January 14, 2011
Beginning Farmer & Rancher Development Program	USDA Department of Agriculture National Institute of Food and Ag	No	No	December 22, 2010
Farmers Market Promotion Program (FMPP)	United States Department of Ag	No	TBD	TBD
Small Business Innovation Research Program	Eleven Federal Agencies	No	N/A	March 1, 2011
Sustainable Agriculture Research and Education Program	NIFA	Yes	March 16, 2011	July 14, 2011
Agriculture and Food Research Initiative - Foundational Program - Food Safety, Nutrition, and Health	USDA National Institute for Food and Agriculture	Yes	January 7, 2011	May 2, 2011

Eligible Entities	Eligible Projects	Match	Total Funding Available	Max Award Amount
Eligible commodity groups, ag organizations, colleges and universities, producers, municipalities, state agencies, and relevant nonprofits.	Must Enhance the Competitiveness of U.S. Specialty Crops. See page 5 of application.	No	\$250,000	\$75,000
Varies	Needs to meet specified guidelines	Yes	Varies	Varies
National Association of County and City Health Officials, the National Association of Chronic Disease Directors, the National Recreation and Park Association, and the YMCA.	Develop and implement strategies to prevent or manage risk factors for heart disease, stroke, diabetes, cancer, obesity, and arthritis.	Varies	Max	Varies
Local and state governments grant funds to eligible communities. Local and state governments can pass money through eligible non-profits and for-profits to stimulate economic recovery and growth.	Stimulate economic recovery and growth, could qualify: beginning farmer programs, community food distribution centers and integrated growing, processing, storage and distribution systems.	Varies	Varies	Varies
Metropolitan cities and urban counties that apply with States who administer the CDBG program	Economic development, housing development, public facilities rehabilitation, construction for low to moderate income people.	Varies	Varies	Varies
Provide employment, education, housing, emergency services and nutritional counseling in low-income communities	Community gardens, canneries, food buying groups, food banks, nutrition and food preparation counseling, group meal provisions.	Varies	Varies	Varies
Turns once-contaminated properties into productive community assets, awarding eligible applicants through grants in job training, assessment, revolving loan fund and cleanup programs.	Turns once-contaminated properties into productive community assets, awarding eligible applicants through grants in job training, assessment, revolving loan fund and cleanup programs.	No	Varies	Varies
Develop more socially and economically equitable access to high quality, affordable, and fresh foods in communities with healthy food deficits; Support small- and mid-sized producer incomes and economic sustainability;	Establish businesses that increase access to healthy, affordable foods, including locally produced agricultural products, to underserved communities; or (b) establish and otherwise assist enterprises that innovatively process, distribute, aggregate, store, and market healthy affordable foods to underserved communities.	TBD	TBD	TBD
Beginning farmers are defined as producers who have 10 years or less of experience, and according to 2007 estimates they account for approximately 21% of family farmers.	State, tribal and local governments; non-profit organizations; colleges and universities; cooperative extensions; other appropriate partners	25%	TBD	\$300,000
The grants are targeted to help communities support local food systems and farmers through the improvement or expansion of domestic farmers markets, roadside stands, community supported agriculture programs and other direct producer-to-consumer market opportunities. 10% of funds will be targeted for low-income communities.	Non-profit organizations, local governments, Indian tribes, economic development corporations, agricultural and producer cooperatives, regional farmers market authorities	None	TBD	\$100,000
USDA SBIR's flexible research areas ensure innovative projects consistent with USDA's vision of a healthy and productive nation in harmony with the land, air, and water.	Small Business	None	\$21,881,251.00	\$100,000
SARE works to help farmers and ranchers adopt practices that are profitable, environmentally sound, and good to communities	Research and education grants, Professional development. Producer grants	TBD	TBD	TBD
For-profit Organizations Other Than Small Businesses, Nonprofits with 501(c)(3) IRS status, other than Institutions of Higher Ed.	This program addresses microbial, pesticide, and chemical contamination of foods; links between diet and health; bioavailability of nutrients; postharvest physiologies and practices; and improved processing technologies	Yes	\$11,000,000.00	\$500,000.00

# implementation plan

table no. 4

Recommendation	Time Frame (Years)	Responsible Agent	Partnering Agencies
Build upon existing assets	Immediately	MO	PSB, LMPHW, ECD, HFS
Form a business incubation and technical assistance team	Immediately	LMG	FPC
Create an Internship team to support FPC and LIFE activities Immediately	Immediately	LMG	MO, FPC
Identify the LIFE Zone Formally	Short	FPC	LMPHW, FPC
Sponsor a Planned Development District for the LIFE Zone	Short	PDS	FPC, PDS
Enlist high net worth	Short	MO	
Focus on Early-stage Business Incubation Technical Assistance	Short	TA	MO
Create a local food economy website	Short	T.A.	UofL IT Students
Define "Local Food"	Short	FPC	LMG, T.A Team

## IMPLEMENTATION PLAN TIME FRAMES

The implementation of the LIFE Zone is important to its success - and this table breaks down the most effective way to do it. There are five time segments that are used and they are outlined below.



### Immediately

These are the easiest objectives and work can start immediately.



### Short

These are not the easiest objectives, but are needed to further develop the idea of the LIFE Zone into a launchable program.



### Medium

The scope of these objectives are reachable, however many of the other earlier objectives must have been completed for these to begin. These steps are where the LIFE Zone becomes implementable.



### Medium-Long

After the LIFE Zone is created these objectives begin to attract investment into the area.



### Long

These are the hardest objectives to reach - often taking large amounts of resources and time spent creating programs.

Recommendation	Time Frame (Years)	Responsible Agent	Partnering Agencies
Appoint a "Local Food Coordinator"	Short	MO	FPC,TA Team
Secure Innovative financing mechanisms to launch LIFE activities.	Short	MO	
Create a Local Food Angel Investor Network	Short	GLI	MO
Create a "Friends of the LIFE Zone" Designation	Short	FPC	MO
Focus on innovative financing mechanisms to launch LIFE Zone activities.	Short	LMG	GLI, PSB, MO
Direct other intergovernmental funding to the LIFE Zone and of the LIFE Zone.	Medium	MO	LMPHW, ED, HFS
Create an agribusiness incubation center in the LIFE Zone	Medium	TA	MO, LMG
Purchase equipment for a certified, community test kitchen in the LIFE Zone	Medium	LMG	TA, PSB
Target growth of Metro's local food system as a primary economic development strategy	Medium	ED	MO
Increase farmers' markets coordination, expansion and marketing	Medium	LMPHW	MO, ECD
Make the LIFE Zone a funding target area for Louisville Metro Government	Medium	MO	LMG
Establish baseline statistics for the demand of locally grown foods	Medium	LMPHW	ED
Create a direct sales and marketing strategy to increase sales to restaurants, institutional buyers and consumers	Medium	MO	GO
Submit an application to the KY Agricultural Development Board on behalf of the businesses who want to locate in the LIFE Zone	Medium	LMG	MO, LMPHW, ED, HFS
Apply for a Farmers Market Promotion Program (FMPP) grant	Medium-Long	LMPHW	
Target Ten percent of METCO loans to local food microenterprise zones.	Medium-Long	ED	MO
Test soils within the LIFE Zone for contaminants	Medium-Long	LMG	
Consider State Enterprise Zone Tax Incentives	Long	MO	GO
Locate a Regional Marketing and food distribution center in the LIFE Zone	Long	PSB	TA,MO
Create a large urban garden demonstration project in the LIFE Zone using land bank properties	Long	HFS	ECD



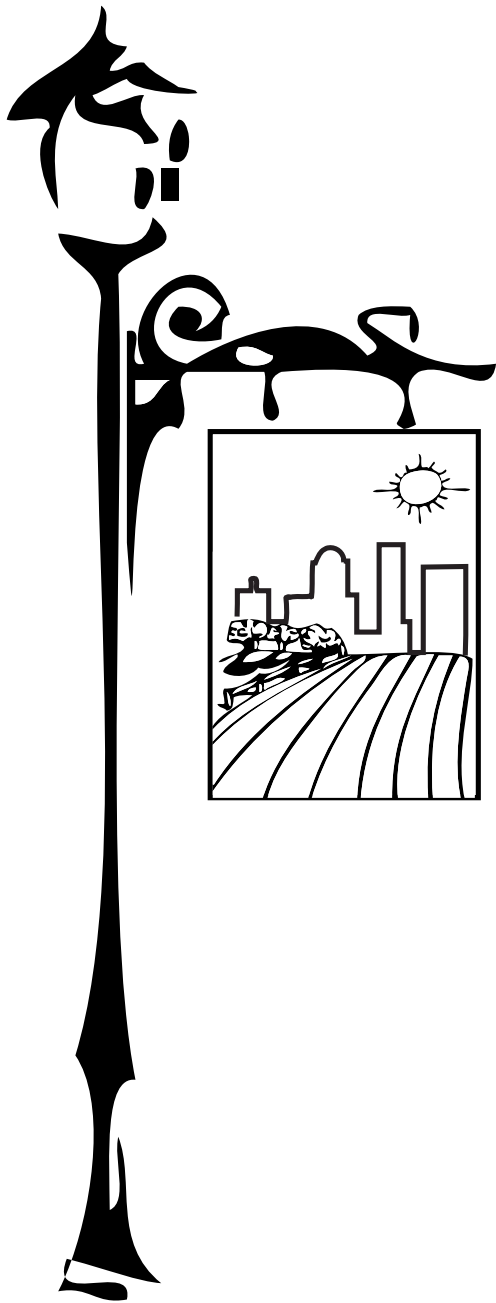


# the louisville LIFE zone conclusion

# conclusion

Louisville's LIFE Zone has enormous potential to positively advance issues of health equity, economic development, neighborhood revitalization and sustainability. With the successful creation of the LIFE Zone, economic development will take place throughout Louisville Metro and surrounding counties while helping to increase the access to healthy, locally-grown food. The success of the LIFE zone will depend on the relocation of companies to the Zone, the establishment of agri-business and the creation of local businesses that support agricultural entrepreneurs.

The Portland and Russell neighborhoods are the ideal location for the LIFE Zone. With the support of the community, establishing a LIFE Zone in Portland is a viable way to encourage new growth within the targeted area and beyond. It is the final finding of the Capstone Studio that Louisville Metro should establish a Locally Integrated Food Economy Zone, or LIFE Zone.



**Above:** The LIFE Zone could be a unique environment - here is a mock up of a potential LIFE Zone sign and lamp post - tying the area back into downtown and its historical roots.



figure no. 21 - renderings of the life zone



figure no. 22 - renderings of the life zone

## existing neighborhood

This is a rendering of the currently existing buildings in the proposed LIFE Zone area - there are a lot of opportunities to fill in the gaps in the street walls and create a cohesive live-work-play area for all of Louisville to enjoy.

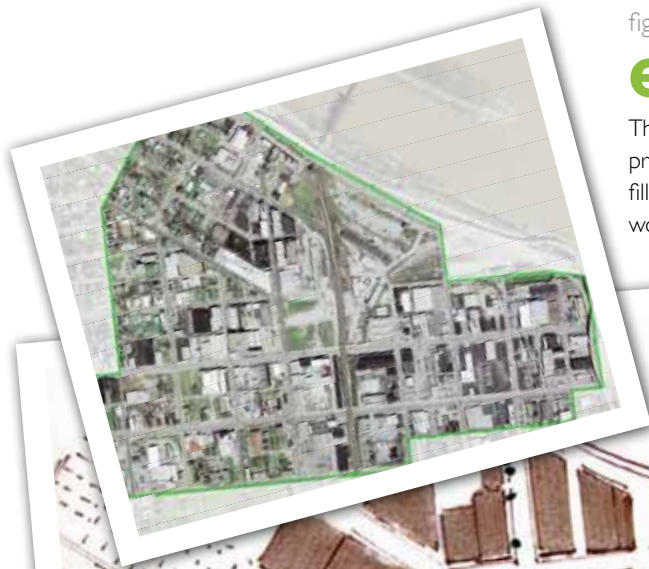


figure no. 23 - renderings of the life zone

# proposed life zone

Increased agricultural, retail, residential, warehousing, and distribution activities fill in the spaces on the western edge of Downtown, centered around the 15<sup>th</sup> Street Market.



figure no. 24 - renderings of the life zone

# corridor traffic flow & public parks

Transportation network, building footprints (significant structures nearest to the LIFE Zone), open space, and existing flood plain (Ohio River included) shown. Major one-way corridors into the district are shown with a gray dashed line.

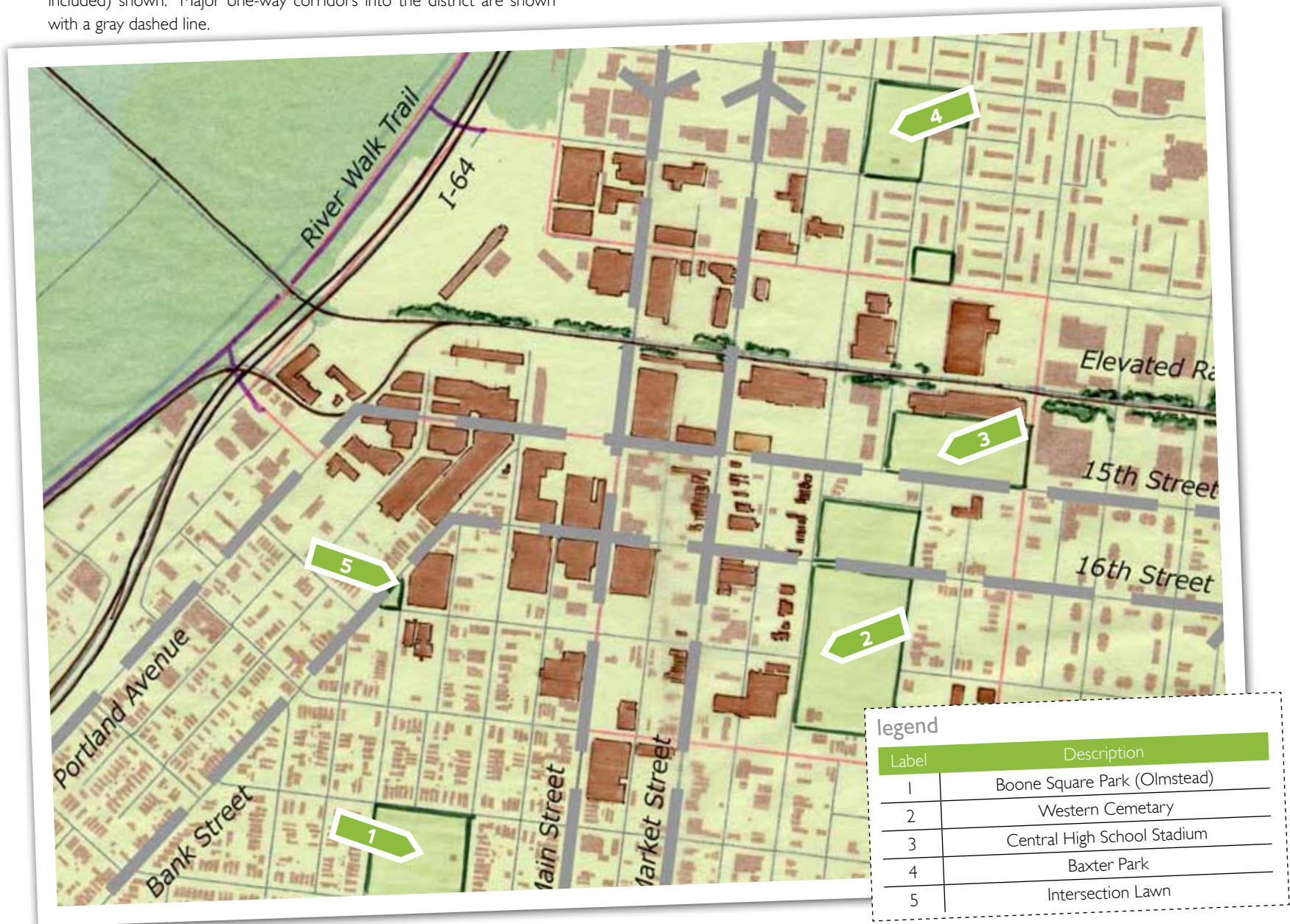


figure no. 25 - renderings of the life zone

## building rehabilitation

The LIFE Zone site already has several buildings that would be excellent targets for rehabilitation. This is a rendering of one of those buildings in the LIFE Zone.







the louisville LIFE zone  
appendices



# appendix a

## planning development districts background and guidelines

**Downtown Form District:** Support development and redevelopment in the downtown district, establishing it as the heart of the city and the economic center of the region.

**example**

**Traditional Neighborhood, Neighborhood and Village Form District:** Support the redevelopment, enhancement and preservation of existing neighborhoods and villages to provide safe and healthy places to live where residents share a sense of place.

**form**

**Town Center Form District:** Support the development, redevelopment, and enhancement of town centers that provide a full range of shops and services to residents of nearby neighborhoods, nurture civic life, and foster a strong sense of community.

**districts**

**Regional Marketplace Center:** Support the development, redevelopment, and enhancement of regional marketplace centers as region-serving mixed-use activity centers with a strong identity.

### KRS authority

PDDs are authorized under Kentucky Revised Statutes (KRS) 100.203(1)(e), which allows a city or county to use zoning to regulate “[d]istricts of special interest to the proper development of the community, including, but not limited to, exclusive use districts . . . planned business districts . . . planned neighborhood and group housing districts....”

The KRS requires cities and counties to plan and base their zoning on their comprehensive plans. In Louisville, this means that a PDD must be based on one of Cornerstone 2020’s relevant form districts.

### Kentucky Case Law on Consistency with the Comprehensive Plan

Zoning of the LIFE Zone must be consistent with the planning goals of Cornerstone 2020. Kentucky’s highest courts uphold PDDs. However, PDDs may not substitute for planning or allow arbitrary decision-making. Requiring conditional approval for all uses constitutes impermissible zoning without planning. Special uses that are compatible with the location may be permitted in advance of an individual application. The Kentucky Supreme Court held that a Louisville Regulation that allowed the Planning Commission to grant waivers for land uses that were incompatible with the zoning violated statutory procedures for zoning changes and variances.

### Types of uses

Stakeholders participating in a meeting with the Capstone Studio discussed and recommended the following uses.

### By-right uses (no approval needed)

These uses would be by-right, meaning no separate zoning approval is needed for these uses once the PDD including them is established. Several of the by-right uses would require establishing a maximum square footage through analysis of other jurisdictions’ ordinances in order to ensure that no use becomes a nuisance or compromises the LIFE Zone’s neighborhood feel. All permissible uses are:

1. Agriculture - Over five (5) Acres
2. Community Gardens which may have occasional sales of items grown at the site
3. Restaurants
4. Bakeries
5. Small Livestock Raising such as chickens, goats, rabbits, ducks, etc.
6. Beekeeping
7. Office Uses related to Agriculture such as extension agencies, Farm to Table, etc.
8. Banks
9. Community/Farmers Markets
10. Nurseries
11. Schools-Primary, secondary and post-secondary
12. Research and Design
13. Single Family Residential
14. Two-family Residential
15. Multi-family Residential with maximum of eight units per building
16. Parks
17. Grocery Stores
18. Food Processing
19. Retail



### Accessory Uses

The only recommended accessory uses and structures permitted in the PDD are:

1. greenhouses, hoophouses, cold-frames and similar structures used to extend the growing season;
2. open space associated with and intended for use as garden areas;
3. signs limited to identification, information and directional signs, including sponsorship information where the sponsorship information is clearly secondary to other permitted information on any particular sign;
4. benches, bike racks, raised/accessible planting beds, compost bins, picnic tables, seasonal farm stands, fences, garden art, rain barrel systems, chicken coops, beehives and children's play areas;
5. buildings, limited to tool sheds, shade pavilions, barns, rest-room facilities with composting toilets and planting preparation houses;
6. off-street parking and walkways; and
7. office spaces related to any of the above uses

### Suggested PDD definitions

(a) "Community garden" means an area of land managed and maintained by a group of individuals to grow and harvest food crops and/or non-food, ornamental crops, such as flowers, for personal or group use, consumption or donation. Community gardens may be divided into separate plots for cultivation by one or more individuals or may be farmed collectively by members of the group and may include common areas maintained and used by group members.

(b) "Greenhouse" means a building made of glass, plastic, or fiberglass in which plants are cultivated.

(c) "Hoophouse" means a structure made of PVC piping or other material covered with translucent plastic, constructed in a "half-round" or "hoop" shape.

### Limited Uses

Limited uses would require a specific location and are regulated by more specific standards within the PDD Design Guidelines. Each of these uses should be limited by a maximum square footage size to prevent nuisance and aesthetics issues:

1. convenience stores;
2. commercial composting;
3. agricultural distribution; and
4. wholesale agriculture distribution

### Conditional Uses

Conditional uses are permissible in all locations; however, they require more information before approval. Conditional uses may need to be implemented based on the neighborhood's desired aesthetics. For example, requiring street vendors to have their exact locations verified to ensure pedestrian access is not impeded, or allowing drive-thru facilities only on interior lots.

### Prohibited uses

Uses not allowed in the PDD.

1. Heavy industry;
2. Big box commercial; and
3. Concentrated Animal Feeding Operations.

### **Metro Code Ordinance**

In Louisville, animals are governed by specific metro ordinances, rather than the zoning code and are thus outside the parameters of the PDD. Metro Code § 91.001 Restraint of Animals requires all animals to be kept under restraint at all times. All livestock weighing more than forty pounds, except horses, stallions, colts, geldings, mares, fillies, ponies, miniature horses, mules, goats and sheep, must be kept on tracts or lots of .5 acres or more.

Horses, stallions, colts, geldings, mares, fillies and mules are permitted on an individual tract, lot, or parcel (as defined in the Land Development Code) of at least one acre or more. All livestock other than poultry must be confined by a fence in good repair, meaning the fence must be sufficient enough to prevent the animal from leaving the owner's property. Livestock found not restrained by a fence in good repair and which present a threat to public safety may be removed and the owner charged with a violation of this ordinance.

All poultry must be kept on tracts or lots of .5 acres or more, unless a tract or lot is on less than .5 acres and only houses five or fewer non-crowing poultry and no more than one crowing poultry. All poultry must be kept in a fence or structure of sufficient height and construction to prevent the animal(s) from leaving the owner's property. All gates or doors to the fence or structure must fit properly and must be locked or secured by a latch. Poultry associated with an agricultural use will not be subject to the restraint requirement as described in this ordinance.

The Capstone Studio recommends amending Metro Code § 91.001 to increase the number of goats, sheep and non-crowing poultry, that are allowed on lots, tracts or parcels less than .5 acres.

Additionally, the City should review the Metro Environmental and Health Nuisances Ordinance, Chapter 96 Health Regulations and Nuisances, Section § 96.11, which covers the storage and removal of manure within Louisville Metro. Paragraph A of this section imposes upon every person owning, controlling, operating, or having charge of any public or private stable, barn, or place where livestock (as defined in § 91.001, but excluding hares and rabbits in numbers less than ten) a duty to keep and maintain a receptacle for the purpose of containing the droppings of manure from such stock. Paragraph B states that every owner, tenant, or occupant must have the contents of the receptacle removed from the premises at least once a week and more often if required by the Health Department. Finally, under Paragraph C, manure must be removed at the expense of the owner, occupant, or agent and may not be used as fertilizer within Louisville Metro without permission, in writing, from the Health Department.

**Planned Development (PD) District**

**A. Intent.**

The intent of the PD District is to promote diversity and integration of uses and structures in a planned development through flexible design standards that:

- Create new development that is livable, diverse, and sustainable;
- Promote efficient and economic uses of land;
- Respect and reinforce existing communities, integrating new development with existing development to ensure compatibility;
- Provide flexibility to meet changing needs, technologies, economics, and consumer preferences;
- Promote development patterns and land uses which reduce transportation needs and which conserve energy and natural resources;
- Lower development and building costs by permitting smaller networks of utilities and streets and the use of shared facilities;
- Protect and enhance natural resources;
- Promote the development of land that is consistent with the applicable form district;
- Encourage a variety of compatible architectural styles, building forms, and building relationships within a planned development.; and
- Preserve the historic development patterns of existing neighborhoods.

The PD District implements the following provisions of Cornerstone 2020:

Goals	Plan Element
Community Form Strategy: A1, A2, A3,	Guidelines 1, 2, 3, 6, 7, 9
B1, B2, B3, B4, C1, C2, C3, C4, D1,	
D2, D3, D4, E1, E2, E3, E4, F1, F2,	
F3, F4, G1, G2, G3, G4, H1, H2, H3,	
H4, K4	
Mobility Strategy: A1, F1, H1, H3, I1,	
I2, I3, I5, I7	
Marketplace Strategy: A1, D1, D2	

**Establishment of Planned Development Districts**

The following Planned Development Districts may be created in the respective form districts as set forth below:

from the Board of Zoning Adjustments. The PD Use Map may restrict the possible locations of specific conditional uses within the specific PD district. EXCEPTION: M-3 zoning district permitted uses shall be prohibited within a Planned Development District.

Form District	Planned Development District	Minimum Size
Neighborhood Form District	Neighborhood/Neighborhood Activity Center	25 Acres/5 Acres
Village Form District	Village Outlying/Village Center	5 Acres/2 Acres
Downtown Form District	Downtown	2 Acres
Traditional Neighborhood Form District	Traditional Neighborhood/Traditional Neighborhood Activity Center	2 Acres/2 Acres
Town Center Form District	Town Center	2 Acres
Regional Center Form District	Regional Center	25 Acres
Traditional Workplace Form District	Traditional Workplace	2 Acres
Suburban Workplace Form District	Suburban Workplace	25 Acres
Campus Form District	Campus	25 Acres

A zoning change application, and review and approval in accordance with KRS Chapter 100 are required for any designation as a Planned Development District. The pattern of development of any proposed Planned Development District shall be consistent with the pattern of the applicable form district.

**Permitted Uses, Limited Uses and Conditional Uses**

The PD – Development Plan shall contain a PD Use Map and a Land Use Category Table that includes permitted, limited and conditional uses. The PD Use Map outlines the locations of different land use categories within the geographic boundary of the PD district. The Land Use Category Table provides the detail description and use listings for the land use categories established by the specific PD district. The PD Use Map and Land Use Category Table may list limited uses and their possible locations within the PD district. Limited uses are those uses within the PD district that require a specific location and are regulated by more specific standards within the PD Design Guidelines. Conditional uses are included within the Land Use Category Table and require a conditional use permit

**Applicability of Land Development Code (LDC)**

A. PD-Development Plan. The provisions of the LDC shall apply to PDDevelopment Plan, unless otherwise specified in the approved PD Development Plan. The PD- Development Plan approved by the legislative body may contain provisions that differ with or are less restrictive than the LDC.

EXCEPTION 1: Footprint caps listed within the applicable form district shall be observed.

EXCEPTION 2: Perimeter landscape buffer requirements at the edges of the Planned Development District may not be less restrictive than the requirements of the LDC, and may be altered on a case-by-case basis only in accordance with LDC waiver provisions.

B. In the event of a conflict between the provisions of this Chapter 2 Part 8 or the approved PD-Development Plan and the provisions of the LDC, the provisions of this Chapter 2 Part 8 or the approved PDDevelopment Plan shall prevail.

C. Specific dimensional requirements of the Planned Development District shall be outlined within the PD – Development Plan Design Guidelines and may refer to specific setbacks outlined within the applicable form district. Proposed dimensional standards shall be consistent with the intent of the applicable form district.

### **Application Requirements**

An application to amend the zoning map to a Planned Development District may be initiated by the legislative body having zoning authority over the subject property, the Planning Commission, or the owner(s) of the subject property. Regardless of the origin of the proposed amendment, it shall be referred to the Planning Commission for a hearing and recommendation before adoption by the affected legislative body pursuant to KRS Chapter 100. Binding elements may be added by the Planning Commission or Legislative Body to any PD-Development Plan.

Prior to filing an application to amend the zoning map to a Planned Development District, a minimum of one public charrette (the charrette process must include an opportunity for the neighborhood to see the outcome of the design process) shall be held by the applicant or his/her agent, with written notification at least 14 days prior to the first day of the charrette to the Planning Commission staff, owners of surrounding property within 200 feet of the proposed development site, and any persons, agencies or organizations the applicant and Planning Staff deems appropriate. Planning and Design Services staff shall be in attendance in order to explain the Planned Development District process. A public charrette is a method of planning which is specifically organized to encourage the participation of everyone who is interested in the making of a development or plan, whether they represent the interests of the general public, public agencies, or a client. Charrettes are intensive planning sessions with goals that include : 1) all those influential to the project develop a vested interest in the design and support its vision; 2) a group of design disciplines work in a complementary fashion to produce

a set of finished documents that address all aspects of design; 3) this collective effort organizes the input of all players at one meeting and eliminates the need for prolonged discussions that typically delay planning projects; and 4) a better product is produced more efficiently and more cost effectively because of this collaborative process. At the end of the charrette, the plan and supporting documents are presented to the public. A summary of input from the charrette must be submitted to the Planning Commission with the zone change application. The public charrette requirement shall not apply in cases of rezonings initiated by the Planning Commission or any legislative body.

### **A. PD-Development Plan:**

1. Applications to amend the zoning map to a Planned Development District shall be accompanied by a PD-Development Plan. The PD-Development Plan shall be approved by the legislative body at the time the rezoning to the Planned Development District is approved. Once approved, all development within the Planned Development shall conform to the PD-Development Plan.

2. Contents of PD-Development Plan.

A PD – Development Plan shall include the following required components:

a. PD Use Map – A map outlining the distribution of permitted use categories within the PD district. The possible locations of limited and conditional uses, if included, shall be located on the PD Use Map as well. Along with the PD Use Map, the Planning Commission or Planning Commission staff may require a PD Concept Plan that includes the location of existing lots or proposed lot pattern as well as the location of existing or proposed streets. The PD Use Map and Concept Plan shall be drawn to scale and shall include a north arrow. Existing structures to remain shall be shown on the PD Use Map. The PD Concept Plan if required may include a potential build-out scenario based on the proposed design guidelines provided with the specific PD – Development Plan proposal.

b. Land Use Category Table – A table listing the land use categories of the specific PD district and the specific permitted, limited, and conditional uses within each category. The table shall also include the maximum floor area ratio and maximum density for each category or use.

c. PD Design Guidelines that include the following minimum standards:

1. a statement indicating the purpose and intent of the PD District and the basis or justification for the zoning request. The statement shall include a statement on how the PD District proposal complies with the comprehensive plan and the requirements of this part.
2. Site design standards in written or graphic form specifying the permitted range of lot sizes (width and length), lot coverage (optional), setback and/or build-to-lines, and the maximum building height for all uses or use categories.
3. Other intensity provisions (optional) such as impervious surface ratios or building coverage ratios.
4. Architectural design standards shall be set forth in the design guidelines and shall be applicable to all new construction and expansion of existing structures. The architectural design standards may be written and/or graphic in nature and may include standards related to building proportions, massing, materials, transitions between differing form districts, and any other design features that assure compatibility with the applicable form district. The design guidelines may be organized into a design pattern book for ease of use.
5. If required by the LDC or Planning Commission: The design and renderings of all focal points, outdoor amenity areas, and open spaces shall be included.
6. If required by the LDC or Planning Commission: Detailed cross-sections of proposed perimeter

landscape buffer areas shall be provided.

7. If required by the LDC or Planning Commission: A Mobility Plan, that includes detailed information related to movement of traffic on the site, including truck routes. The mobility plan shall emphasize movement of pedestrian and bicycle traffic on-site. Provisions shall be made to address safe pedestrian and bicycle intersection crossings and movement through parking facilities.
8. Sign Guidelines – Regarding the location, number, size (height and area), style, materials, lighting, and movement of text. Signage shall comply with the minimum requirements of chapter 8 of the LDC.
9. Other design standards deemed necessary by the Planning Commission or legislative body.

3. Detailed Development Plan Requirement.

Prior to the development or redevelopment of any property within

a Planned Development District, a Detailed Development Plan demonstrating compliance with the PD-Development Plan and other applicable regulations shall be approved by Director or designee. The Detailed Development Plan shall include all information required for such a plan set forth in LDC Section 11.4.4.B.

4. Amendments to the PD-Development Plan.

Requests to amend an approved PD-Development Plan may be made by the Planning Commission, the legislative body with zoning authority, or the owner(s) of property within the Planned Development District. Major Amendments to an approved PD-Development Plan with regard to permitted, conditional and limited uses, density and intensity of use and/or any design change that may negatively impact adjacent property owners may be approved only by the legislative body with zoning authority, following the same procedure as the initial approval of the Planned Development District and PD-Development Plan. Minor amendments to the PD – Development Plan with regard to changes to the PD Design Guidelines may be approved by the Planning Commission or designee. EXCEPTION: A public charrette shall not be required for a minor amendment to the PD.

# appendix b

## summary of stakeholder meeting

On Saturday, March 19, the Capstone Studio hosted a LIFE Zone stakeholders' workshop at the Urban Design Studio at 507 South Third Street in Louisville. Thirty-two stakeholders attended the session. Assistant Project Manager, Robert Klump, explained the purposes and focus of both the Capstone Studio class and the LIFE Zone. Louisville Metro Policy Analyst, Brandon Coan, provided participants with additional background information on the LIFE Zone. Studio members, Connie Archer and Stephanie Quarles, presented the stakeholders with an overview of the LIFE Zone's potential along with the main objectives of the feasibility study. Klump then explained the workshop's purpose and agenda and asked participants to introduce themselves. Attendees included local food growers and processors, representatives of community-based agriculture initiatives, produce distributors, restaurateurs, local chefs, operators of community gardens and representatives from the local Chamber of Commerce, Greater Louisville, Inc. Most participants shared their own interests in the LIFE Zone and what they hoped to see the proposed zone do. Klump then shared the ways in which the Capstone Studio hoped the stakeholders could contribute to the LIFE Zone through input and information.

Maria Teresa de la Cruz led an exercise, entitled "WHAT," in which all stakeholders participated. de la Cruz showed the stakeholders a series of thirty slides depicting land uses or activities that could take place in the LIFE Zone. Participants then rated which uses or activities they found the most desirable and which they found the least desirable. Afterwards, the group talked about the exercise and what they would like to see and experience in the LIFE Zone.

For the next exercise—"WHERE"—participants broke out into five groups, each surrounding a table with a large aerial map of Louisville Metro and a set of smaller maps showing intensity of six features of potential importance to the project (population density, vacant property, proximity to farmers markets, proximity to grocery stores, prevalence of crime and concentration of publicly owned land). Two Studio members sat at the tables and loosely led each group in brainstorming

where to draw rough boundaries of the ideal location for the LIFE Zone. The Studio documented each group's reasons for choosing its preferred LIFE Zone area.

These small groups then began the "HOW" portion of the workshop, in which each group thought of potential barriers to the LIFE Zone's success, as well as incentives that would help to ensure its success.

After completing these exercises, the small groups separated and one stakeholder from each group shared the results of their group's exercises with the whole room. Project Manager Daro Mott shared the results of the "WHAT" exercise by displaying the slides stakeholders had ranked as the ten most and least desirable land uses and activities that could take place in the LIFE Zone. Mott and Klump closed the meeting by sharing the Capstone Studio's next steps, anticipated final products and the time frame for completion of the feasibility study.

**food for thought**

Early involvement by the community in public decision-making takes longer initially but actually saves total cycle time from start to finish.



# appendix c

## detailed map technical analysis

Following the public meeting the Capstone Studio determined the components necessary to assess potential for a LIFE Zone.

### Computed Variable Description

- a Food Access
- b Proximity to Existing Related Businesses
- c Percent of Available Land
- d Population Density
- e Income

From there data collection began by utilizing and leveraging a number of relationships between members of the Capstone Studio with professionals in Louisville Metro Government, Planning and Design Services, MSD, Public Works, Economic Development, Greater Louisville Inc., LOJIC, Louisville Water Co., Office of the Mayor, Department of Public Health as well as using readily available US Census Information, specifically the shape files at the block level for the 2000 Census and the raw population counts, as well as information from the 2008 ACS.

Once many of the raw computed variables were collected an analysis process began where each of the variables

were normalized in an attempt to create an “apples to apples” comparison. This was done by normalizing using the z-score method and applying it to each variable. The z-score measures the number of standard deviations each variable is from their mean. These scores were then be weighted in a formula to create a basic cluster map (see Figure No. 11)

Each of the variables used in the equation were specifically chosen and weighted based on an analysis of each variable. At the onset of the research there was a general understanding of what effects the variables should have on the final composite map. Understanding this, the group identified the three largest factors in determining the LIFE Zone as Food Access (a variable that measures the likelihood Food Deserts), Population Density (as a variable to simultaneously measure potential customers and available employees) and Income (a variable to proxy poverty/wealth). Two other variables were also identified, but weighted much lower because of the skewing effects they would have had on the basic composite map if all the variables were similar in weight. The variables in question have very high z-scores that tended to be clustered towards desirable end of the spectrum, but would skew the results too heavily if left unweighted. All variables were measured at the 2000 Census Block level. Below is the variable breakdown of these five variables.

	Computed Variable Description	+/-	Weight	Lowest Value	Highest Value
a	Food Access	-	31.6%	-6.85	1.87
b	Proximity to Existing Related Businesses	+	2.5%	-0.11	22.10
c	Percent of Available Land	+	2.5%	-0.06	55.82
d	Population Density	+	31.6%	-0.06	24.39
e	Income	-	31.6%	-1.67	3.15





